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BUSINESS WEEK



From Wright in New Jersey to Douglas in California, aircraft cylinder heads go the fast way.

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Flying Yankee-Mountaineer of the Boston & Maine, Maine Central

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Champion of the Florida East Coast

Dixie Flagler of the Florida East Coast-Chicago & Eastern Illinois

South Wind of the Pennsylvania

Crusader of the Reading

Chicago-Des Moines Rocket • Chicago-Peoria Rocket • Kansas City-Dallas Rockets • Kansas City-Minneapolis Rockets of the Rock Island

Silver Meteors of the Seaboard



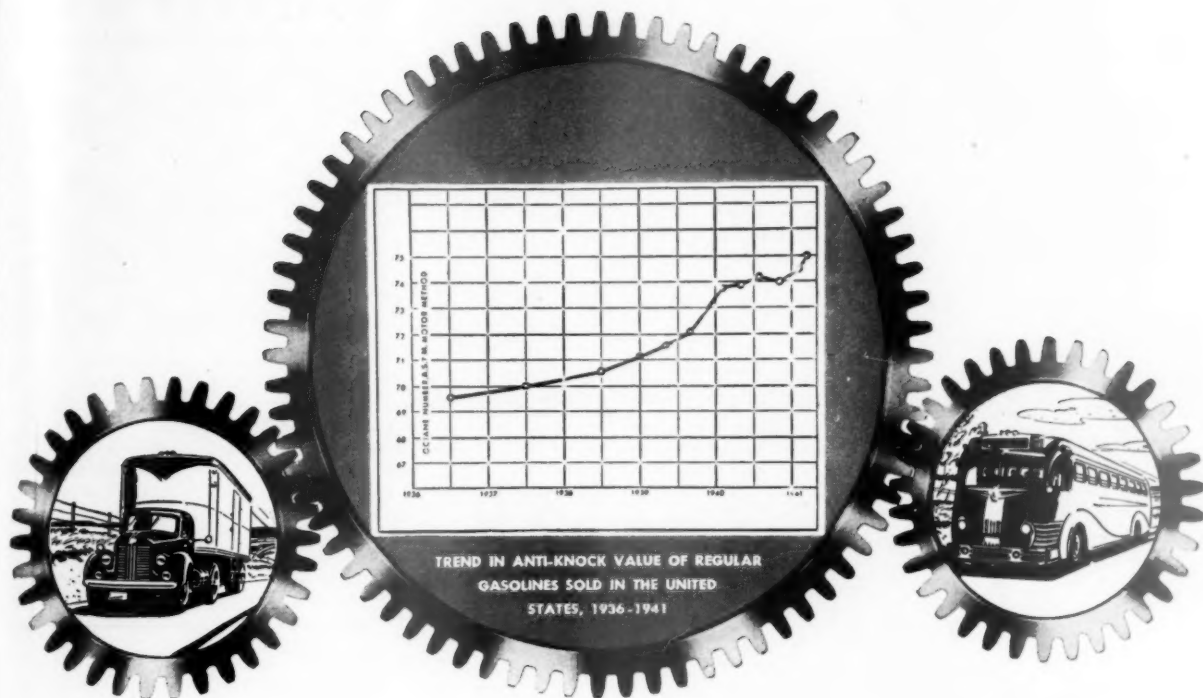
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• Thirteen hours between bustling Kansas City and booming Dallas is the record schedule of two of the Rock Island's six Budd-built stainless steel streamliners. Your

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BUSINESS WEEK

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Page	Description	Credits
14	Mackenzie King	Harris & Ewing
15	Lockheeds	Acme
16	Wheat Conference	Acme
17	Oil Tanker	Acme
18	Airacobras	Austin Co.
24	Homestead Expansion	W. W. McKinney, Meadow Gold Dairies, Inc.
26	Tank Engine	Wide World
28	Auto Use Chart	Automobile Manufacturers Association
38	Flashcasting	Phila. Bulletin
55	Edmund Burke	Wide World
60	Fireproof Rowboat	British Combine

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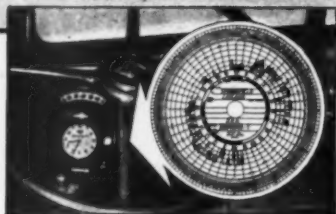


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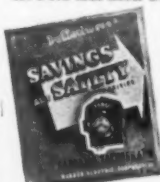
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BUSINESS WEEK

and The ANNALIST

July 19, 1941

THE COVER

That consignment of aircraft cylinder heads, shown on this week's cover being loaded for air-express shipment from New Jersey to California, is one example of the job the airlines are doing—lending wings, literally, to defense production. Today machine tools, vital parts, even such trifles as steam shovels, tractors, and bulldozers go by air to prevent bottlenecks, layoffs, and slowdowns. It all adds up to a 108% increase in air-express shipments of heavy industry products—page 22.

CROESUS IN REVERSE

Webster's gives gold, silver, and platinum as the "precious metals." Industry has a different list. It reads aluminum, zinc, copper, tin. The pinch on these metals has become so tight that there's serious talk at the present time of substituting silver (at \$5.10 a lb.) for tin (at 50¢ a lb.) and copper (at 12¢ a lb.). The outlook for metals, what substitutions are possible, what aren't—page 15.

OIL FOR TROUBLED WATERS

In spite of the frenzied crackdown of Oil Coordinator Ickes, the gasless Sunday is not yet with us; East Coast gasoline stocks have been rising. But nobody knows how many more tankers may go to Britain, and even with things the way they are now a shortage is in sight for fall. That's why both Washington and the industry are hedging against the evil day—picking up a tanker here and a tanker there, pushing pipeline legislation, facilitating tank car transport—page 16.

WAGES ON ICE

U. S. industrialists who are tossing on the horns of a dilemma—labor's demands for higher wages on one side, OPACS's price-curling on the other—are more than a little interested in Canada's move to freeze wages in all defense industries at their present level for the duration of the war—page 14. There's a "bonus" plan for adjusting the frozen wages to changes in the cost of living, which is worth some attention.

LATIN FROM MANHATTAN

If you're interested in Latin American broadcasting, you'd do well to look, not below the border, but in New York City, and in Boston, Cincinnati, and Schenectady. That's where the powerful shortwave transmitters that are serenading our good neighbors are located. Commercial shortwave to Latin America is warming up—see the story on page 32. All that's needed is one big advertiser (Ford and Coca-Cola are rumored as possibilities) to give it a send-off.

WHERE TO FIND IT

Washington Bulletin.....	7	Defense Business Checklist....	53
Figures of the Week.....	11	Finance	54
The Outlook	13	Commodities.....	58
Marketing	32	Business Abroad	60
Regional Market Outlook.....	32	Profit & Loss.....	65
Labor & Management.....	43	The Trading Post	67
New Products	52	The Trend.....	68

Business Week • July 19, 1941

WASHINGTON BULLETIN

FOR BUSINESS BY BUSINESS WEEK'S WASHINGTON BUREAU

Piecemeal Price Control

The Administration's battle for price control has begun—just begun.

The President has come to Leon Henderson's aid, following a preliminary skirmish with leaders on Capitol Hill in which the Price Administrator came off second-best. The pattern of legislation now is being drawn in "three-cornered" conversations among the President, Henderson, and Administration leaders in Congress.

The Administration won't put all its price-control eggs in one legislative basket. Price and rent regulation and several auxiliary devices intended to check inflation will be presented in a series of bills.

This piecemeal strategy, as F.D.R. frankly admits, is designed to get the legislation through Congress easier—win something rather than risk the loss of everything. This maneuver may save various supplementary measures but it doesn't throw any protection around the central issue—government control of commodity prices.

Fight All along the Line

Practically every phase of an inflation-control program is a contentious issue:

Agriculture will seek to elude any effective price ceilings on farm products and will probably succeed.

Rent control will run the gauntlet of powerful real-estate interests. Adoption by Congress is likely, but effective enforcement is a headache.

Broad powers to suspend import duties on defense materials will kick up a terrific fuss.

Ready approval, however, is likely for technical amendments to the Securities and Exchange Act to stimulate capital investment in expansion of defense industries, also of nondurable consumer-goods industries that will help to soak up buying power without interfering with defense production.

Restriction of consumer credit may be supported by legislation to which Congress would offer no strong objection.

No Outright Ban

Henderson's technique of establishing price ceilings for selected commodities which push out of line will afford a basis for the new price-control legislation but this will provide "practical" penalties to back up orders instead of the present empty threat of commandeering plants or cutting off supplies of materials. This method won't bring inflation to a halt,

but an outright prohibition on price increases goes against the grain, both in the Administration and in Congress.

The President said with a straight face this week that he'd never heard of Baruch's plan to freeze all prices as of a given date. This might not have been interpreted as opposition to Baruch's widely broadcast proposal if he had not added that price-freezing depends on the article or even on the locality.

Problem: Wage Control

No direct wage control is in sight—either at the hands of Roosevelt or Congress. This, in effect, puts a ceiling on profits, for manufacturers will be asked to absorb the wage boosts rather than raise prices. When they cannot absorb wage boosts, they will apparently be permitted to advance prices, for Henderson asserts positively that the Office of Price Administration and Civilian Supply won't force any manufacturer into the red. Concerning wage control, the President said this week that the Administration is trying to keep things in balance—wages, prices, and profits.

Henderson's personal fate at the hands of Congress is precarious. The chances are he will be hemmed in by a board representing industry, labor, and agriculture.

Autos in the Middle

The automotive industry shuttled back and forth this week between conferences at the Office of Production Management and the Office of Price Administration and Civilian Supply. This industry is caught in the overlapping jurisdiction of the two agencies. Because of its intermingled character as a defense industry and consumer industry, it has no choice but to deal with both. The OPM meetings resulted in putting a "defense value" on trucks, thus throwing the brunt of reduced production on passenger cars. OPACS will proceed to the drafting of the industry's "civilian" share of materials. It will be a deep cut, arbitrary in the beginning and aimed primarily at establishing a basis for later adjustment.

● **Needed: More Orders**—With peak employment on their present government contracts coming just after the turn of the year, auto manufacturers are confronted with the problem of holding their labor forces together, particularly after the peak of regular car production is passed in the spring. There aren't enough defense orders in sight to take up the slack.

Roosevelt vs. Doughton

What happens next to the Ways and Means Committee's \$3,500,000,000 tax bill depends upon which is more stubborn, Roosevelt or Doughton, the committee chairman. The President still favors the Treasury's rejected excess-profits tax plan, which, if adopted, would conveniently permit the committee to drop the hot potato of mandatory joint returns for husbands and wives. Doughton is determined to push the tax bill through in its present form, fearful that the entire program will have to be fought through again if reopened at any point. But Doughton's committee is anxious to get rid of the joint-return plan, may now swallow the profits-ceiling plan on which it gagged before.

● **No Easy "Out"**—Other alternatives—previously rejected higher taxes on incomes, gasoline, tobacco, and beer—would raise almost as much outcry as joint returns.

Hopkins Enigma

Harry Hopkins' rôle as master mind of the defense program is wearing thin, which may or may not have something to do with his latest trip to England. The program is suffering by reason of his conduct in a position of presumably very high responsibility. The government pays him \$10,000 as lease-lend administrator and he's the President's closest friend. He eats, sleeps, and has his office in the White House. He sees and calls whom he wishes, gives orders, but otherwise is inaccessible. He's an enigma to his once closest New Deal associates.

If there's any one official in Washington today who's being lambasted by New Dealers and Old Dealers alike, it's Hopkins. His peculiar conduct is pulling down the morale of the whole organization.

Presidential Confidence?

Hopkins' job and his handling of it can only be explained as the outgrowth of the President's reluctance to set up any formal executive direction of the defense program as a whole. The position given to Hopkins indicates that he has the complete understanding and confidence of the President. But has he? Hopkins himself seems to be the victim of Roosevelt's inherent aversion to delegating authority. Hopkins, for example, wanted to surround himself with a small picked staff of key defense officials. In fact, he told Stettinius, OPM priorities

chief, and W. L. Batt, deputy director of OPM's production division, to report for duty at the White House.

The President overruled Hopkins, but neither Stettinius nor Batt was told of Roosevelt's decision and they reported at the appointed time. Hopkins secluded himself and the OPM officials finally learned from Wayne Coy, the President's liaison with the Office for Emergency Management, that Hopkins' plan had been indefinitely postponed.

Watching Japan's Moves

The course of Japan's new government is unalterably set by its dream of becoming the political master of the Orient. Only important deterrent is the dread of war with the United States. If Japan seizes the rest of French Indo-China, no one is likely to interfere, though it will give Tokyo additional air bases and a naval base (at Cam Ranh) less than 600 miles from Singapore.

A drive on the Soviet Far East would cause an immediate tightening of the economic blockade by both Britain and the United States. (Note Washington's warning this week in delaying Japanese freighters in Atlantic ports and at the Panama Canal.) Also, Russia is reported to have 100 submarines based at Vladivostok, and a large fleet of heavy bombers easily capable of flying the 700 miles to Tokyo and return.

A Japanese drive to the Indies is probably out of the picture until there are signs of a complete Soviet rout and until the United States is more definitely committed in the Atlantic.

Machinery for Russia

Washington is sufficiently impressed with Russia's resistance to the Nazis to have released \$1,700,000 worth of machine tools and oil-field equipment which have been held up at United States ports for as long as six months. The equipment all bought during the last year and a half by Amtorg Trading Corp., American buying and selling agency of the Soviet Union, is being loaded on 11 Russian freighters now in this country for delivery to Vladivostok.

Also under consideration is a military and trade mission which will go to the Soviet Union to check Soviet needs, advise Washington on what priorities might be advisable on equipment and supplies likely to be needed this winter.

Britain's Shipping Losses

Don't be misled by the optimistic tone in which Britain's June shipping losses were announced this week. Although far below the disastrous May total (498,000 tons), the 329,296 tons of Allied vessels sunk in June compare with 326,789 tons of new shipping completed in all United States shipyards for the

entire first six months of 1941. Before the end of 1943, this country expects to complete 10,000,000 tons of merchant vessels, but not until late in 1942 can the monthly output of new vessels possibly reach 350,000 tons.

Aluminum Scrap

OPM took the National Association of Manufacturers statement that "there is no real shortage of aluminum for defense purposes" as a slap which hurts the impending national scrap-collection campaign. Hence, the slap-back at N.A.M. by Knudsen and Hillman. Hence, too, the publicizing of N.A.M.'s letter pledging its cooperation to the La Guardia Office of Civilian Defense in the collection drive. A survey by N.A.M. revealed no current shortage, but OPM contends plane-production schedules are written down to the limiting factor of aluminum supply.

Additional Production

While the bickering went on, OPM's Production Division completed recommendations for locations to yield 600,000,000 lb. additional annual production of the metal. Five companies will operate these government-financed plants. The two present operators, Alcoa and Reynolds Metals, get 440,000,000 lb. Union Carbon & Carbide, Olin Corp., Bohn Aluminum Co. share the rest. Significant, in light of recent political fireworks, was OPM's pat on the back for Alcoa in the announcement it would supervise design and construction of the Union Carbon and Olin plants, help train technical staffs.

• Fizzle—Too late for more than the record is C.I.O.'s report to the President urging aluminum expansion. Like C.I.O.'s programs for planes and steel, the report came out after the same results had been achieved another way.

More Power

The vast program of hydro and steam electric-power expansion submitted this week to President Roosevelt by the Federal Power Commission is the most striking instance to date of government-industry action to anticipate the defense needs. But the scheme still has to pass OPM, where J. A. Krug, power expert recently recruited from TVA, may have something to say about its feasibility.

Keyed to an estimated defense load of 20,000,000 kilowatts in 1943, FPC's plan—evolved from conferences with utility executives over the past month—calls for setting up orders and priorities now for about 7,000,000 kw. of new generative capacity to be built in the two-year period, 1943-44, and for a total of some 15,000,000 kw. of capacity to be built over a five-year period at a cost of about a billion dollars. Equipment

will be financed in the first instance by the RFC under arrangements permitting utilities, public and private, to take over the units, either directly or on a lease-purchase basis, as deliveries are made on schedules arranged by FPC.

Railroads Decline

Lower rail rates on government steel from the Eastern Seaboard to the West Coast may have to be brought about the hard way. The agencies interested in the reduction—OPACS, Army, Navy, Maritime Commission, and the Treasury's procurement division—got a snubbing when the proposal for a 90¢ per 100 lb. blanket rate on shipments to the West Coast from all points east of the Mississippi was "respectfully declined" by the roads involved.

OPACS is treating the refusal as a bargaining move on the part of the railroads and is attempting to keep negotiations open. If they break down, the agencies will carry their case to ICC.

P. S.

Ben Cohen, the brain-truster, refused the Securities and Exchange Commission vacancy that was given to Edmund Burke, Jr. He wants to keep a free hand for jobs that keep the war pot bubbling. . . . Cohen's partner, Tom Corcoran, has added another client to his lucrative law practice. The client is T. V. Soong, Free China's financial wizard and brother-in-law of Generalissimo Chiang Kai-shek. . . . Epitaph on a strike, as drafted by Col. Jesse A. Ladd, commanding 15th Infantry: "To the employees of North American Aviation: It is desired to take this opportunity to express to the employees of North American Aviation our sincere appreciation for their cooperation during the stay of the 15th Infantry at the North American plant. The period that the regiment and attached troops have been camped at the plant has been made a most pleasant tour of duty for all officers and enlisted men of the regiment due to the friendly cooperation and assistance of all employees of the company." . . . Justice Murphy is itching to quit the Supreme Court, get back in the swim. He'd like to be Ambassador to Mexico or get back his old job as High Commissioner of the Philippines. Lacking that, he wants to stay on the bench but take a trip to the Philippines to patch up trouble that Commissioner Sayre has stirred up. . . . The Navy and Electric Boat Co., which builds Navy subs, are reported to be upset by a rumored deal by Shell Oil to take over the Groton Iron Works near New London, Conn., for tanker construction. Secretary Knox says the Navy hasn't made use of the idle Groton yard for fear it would drain labor from Electric Boat.

FIGURES OF THE WEEK

THE INDEX (see chart below)

PRODUCTION

	§ Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
Steel Ingot Operations (% of capacity)	97.2	96.8	99.0	95.9	86.8
Automobile Production	114,318	96,457	134,682	115,935	65,176
Engineering Const. Awards (Eng. News-Rec. 4-week daily av. in thousands)	\$31,444	\$29,989	\$22,438	\$18,404	\$14,580
Electric Power Output (million kilowatt-hours)	3,141	†2,867	3,066	2,985	2,652
Crude Oil (daily average, 1,000 bbls.)	3,871	3,658	3,823	3,364	3,561
Bituminous Coal (daily average, 1,000 tons)	1,694	†1,845	1,597	1,755	1,432

TRADE

Miscellaneous and L.C.L. Carloadings (daily average, 1,000 cars)	91	90	87	77	75
All Other Carloadings (daily average, 1,000 cars)	61	61	55	41	50
Check Payments (outside N. Y. City, millions)	\$4,539	\$6,636	\$5,181	\$5,668	\$3,511
Money in Circulation (Wednesday series, millions)	\$9,695	\$9,704	\$9,393	\$8,628	\$7,884
Department Store Sales (change from same week of preceding year)	+28%	+23%	+6%	+4%	+7%
Business Failures (Dun & Bradstreet, number)	184	216	230	262	261

PRICES (Average for the week)

Spot Commodity Index (Moody's, Dec. 31, 1931 = 100)	206.8	203.8	198.2	174.4	155.8
Industrial Raw Materials (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	142.2	†140.5	140.3	122.5	110.4
Domestic Farm Products (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	148.4	146.7	145.5	128.9	113.4
Iron and Steel Composite (Steel, ton)	\$38.15	\$38.15	\$38.15	\$38.47	\$37.68
Scrap Steel Composite (Iron Age, ton)	\$19.17	\$19.17	\$19.17	\$20.66	\$18.38
Copper (electrolytic, Connecticut Valley, lb.)	12.013¢	12.035¢	12.054¢	12.033¢	10.823¢
Wheat (No. 2, hard winter, Kansas City, bu.)	\$0.99	\$0.98	\$0.98	\$0.86	\$0.70
Sugar (raw, delivered New York, lb.)	3.47¢	3.45¢	3.50¢	2.95¢	2.69¢
Cotton (middling, ten designated markets, lb.)	15.26¢	14.72¢	13.79¢	10.14¢	10.42¢
Wool Tops (New York, lb.)	\$1.263	\$1.248	\$1.282	\$1.192	#
Rubber (ribbed smoked sheets, New York, lb.)	21.99¢	21.63¢	21.38¢	20.09¢	20.95¢

FINANCE

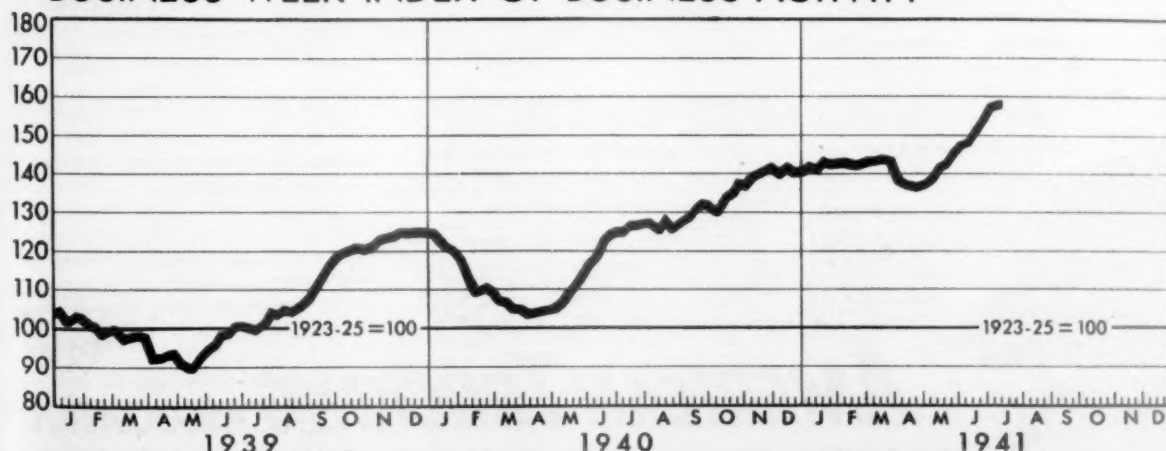
90 Stocks, Price Index (Standard & Poor's Corp.)	81.8	80.1	78.3	85.7	79.4
Medium-Grade Corporate Bond Yield (30 Baa issues, Moody's)	4.28%	4.29%	4.31%	4.38%	4.78%
U. S. Bond Yield (average of all issues due or callable after twelve years)	1.90%	1.90%	1.89%	1.97%	2.30%
U. S. Treasury 3-to-5 year, Note Yield	0.39%	0.38%	0.37%	0.43%	0.56%
Call Loans Renewal Rate, N. Y. Stock Exchange (daily average)	1.00%	1.00%	1.00%	1.00%	1.00%
Prime Commercial Paper, 4-to-6-months, N. Y. City (prevailing rate)	‡%	‡%	‡-‡%	‡-‡%	‡-‡%

BANKING (Millions of dollars)

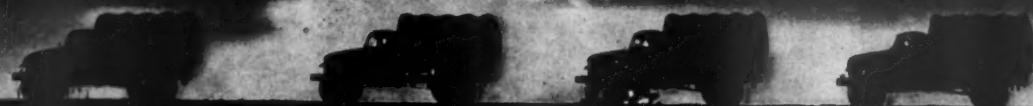
Demand Deposits Adjusted, reporting member banks	23,920	23,949	24,071	22,494	20,824
Total Loans and Investments, reporting member banks	28,481	28,325	28,131	25,614	23,683
Commercial and Agricultural Loans, reporting member banks	5,935	†5,898	5,764	5,033	4,447
Securities Loans, reporting member banks	949	†981	925	959	848
U. S. Gov't and Gov't Guaranteed Obligations Held, reporting member banks	14,471	14,293	14,233	12,629	11,642
Other Securities Held, reporting member banks	3,557	3,579	3,660	3,682	3,580
Excess Reserves, all member banks (Wednesday series)	5,120	5,270	5,490	6,835	6,833
Total Federal Reserve Credit Outstanding (Wednesday series)	2,249	2,273	2,249	2,237	2,491

* Preliminary, week ended July 12th. † Revised. § Date for "Latest Week" on each series on request. # Not available.

BUSINESS WEEK INDEX OF BUSINESS ACTIVITY



WAKE UP, AMERICA!



Trucks speed production of planes, tanks, guns. Remove interstate barriers—and trucks will do still more

IN times of national emergency, motor freight comes as a God-sent blessing. Trucks slice through time—deliver in hours shipments that might take days.

Yet trade barriers stop trucks . . . even those carrying defense materials. One state has held cargoes 48 hours and more.

Electric welders built in Detroit for a southern powder plant were detained 22 hours.

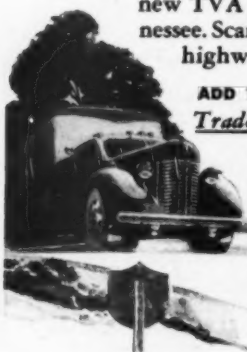
NATION-WIDE PROBLEM

Trade barriers hit at southern cotton flowing north to be made into gun powder and uniforms. They tie up airplane parts from Indiana . . . defense products from the giant

new TVA plants in Tennessee. Scarcely a national highway is immune.

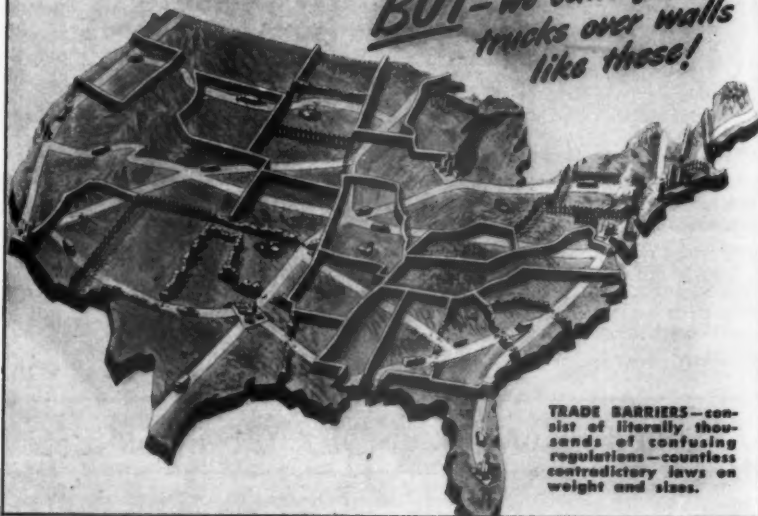
ADD TO TAX BURDEN

Trade barriers affect everybody's personal budget. For



BEHIND EVERY ARMY CARAVAN ROLLS A FLEET OF MOTOR FREIGHT CARRIERS

***BUT**—we can't jump trucks over walls like these!*



TRADE BARRIERS—consist of literally thousands of confusing regulations—countless contradictory laws on weight and sizes.

although the speed and flexibility of motor freight cuts the cost of everything you eat—wear and buy—trucks could save you still more except for state line delays.

Every hour, every day; these useless burdles squander precious time—add to your defense tax burden—increase your cost of living.

Now that America is in urgent need of *all* her transportation resources, isn't it time that these barriers be abolished?

This map—and complete, last-minute information on Trade Barriers—Sent to you free on request.



AMERICAN TRUCKING ASSOCIATIONS

WASHINGTON, D. C.

THE OUTLOOK

Tough Days—with Reservations

Henderson's warning must be weighed against continuing industrial expansion. Production is headed for higher levels despite curtailment of durable consumer-goods output.

In his hard-days-are-here-again speech at Atlantic City this week, Leon Henderson, Administrator of the Office of Price Administration and Civilian Supply, left little to the imagination. He painted a picture of "factories made idle by lack of raw materials to turn out civilian goods; of men made idle by lack of materials to work with, of single-industry towns blighted by a spurious prosperity based on production of goods that we can't wear, or eat, or live in."

Long List of New Highs

Now Mr. Henderson has never been known to call a spade less than a spade. Therefore, we ought to look behind his Atlantic City warnings before we leap. For, though shortages have arisen in certain key defense materials—aluminum, special steels, machine tools—and though additional shortages are bound to develop as time goes on, the basic fact remains that the country has undergone and still is undergoing one of the broadest industrial expansions in its history.

Right now, the steel industry is operating at 97.2% of capacity, and it has been hitting above 90% since August—about 11 months. That's the longest 90% stretch on record; in 1929 the run lasted only six months. Cotton consumption likewise is at an all-time high; so is shoe output; so is the physical volume of retail sales. Indeed, the list of new highs can be extended ad infinitum—electric power, heavy construction, crude oil, rayon, machinery output, and, of course, airplanes.

Consumer Goods Outlook

Furthermore, although in the durable consumer-goods fields—refrigerators, washing machines, automobiles—contraction is taking place, there is still room for some expansion of output and sales in the nondurable consumer-goods industries, such as textiles, clothing, shoes. Sporting-goods production and sales are booming, and probably will continue to expand. Here is an example of how purchasing power tends to spill over from one type of merchandise to another.

Thus, the dismal outlines of Mr. Henderson's futuristic picture can be filled in with a few bright colors. However, this is not to indicate that all is

well. Business men and civilians are facing tough days; restrictions are going to increase rather than decrease. Priorities may well extend to companies manufacturing industrial and business equipment that is not directly needed in armaments, such as store fixtures; textile, shoe, cigarette, and laundry machinery; business machines, air-conditioning equipment and other similar products.

And, as pointed out before (BW—May 31 '41, p. 64), consumer and other nondefense companies with large machine shops may be drawn into the armament effort. Machines and man-hours thus diverted to defense would mean an equivalent cut in new machines available for civilian-goods output.

But even so, the dire consequences suggested by Mr. Henderson do not emerge after a careful examination of the economic outlook. It is true that

some consumer-goods production will drop; it is true, also, that unemployment will rise when factories are forced to close down. But it is equally true that these dislocations will represent but a small part of our total national economy. And from the standpoint of aggregate output, the longer-term trend still seems to be up. An automatic corrective is at work. Curtailment in non-defense industries is not likely to mean long-term unemployment—certainly not when every effort is being made to build more armament plants and get them into production.

Wider Price Controls

The worst that is likely then is this: We will have some temporary—and, in spots, severe—dislocations as consumer-goods plants are shut down by materials shortages; and we will have a definite oversupply of spendable income (because of expanded payrolls) relative to the supply of goods. So prices will tend to rise. And that means, of course, that OPACS will have to extend its price controls over a wider section of industry than it has so far.

Retail ceilings are likely to develop as merchandise stocks run down. Al-

IN THE OUTLOOK:
SPECULATIVE CONFIDENCE



The rather smart rally the stock market has had since its recent low—up 5%—shows as that tiny little curl right at the end of the "confidence" curve. The reason it hardly appears at all is that the Business Week Index of Business Activity has advanced almost as much, from 155 to 159. Thus, although investors and speculators are

paying slightly more for stocks, simultaneously they are getting for their money a higher volume of industrial turnover. As a result, there was no important net change in the Index of Speculative Confidence; business volume, as such, is still selling at a low cash value in the stock market—at just about the lowest price on record.

ready, merchants are worried. Whereas at this time last year they were still playing inventories close to their chests, now their commitments are at record high levels. In the Cleveland Federal Reserve District, for instance, orders currently are more than double what they were a year ago (page 32).

Henderson's price controls, incidentally, have played hob with the statisticians. If prices are fixed, then commodity price indexes don't measure what they're supposed to measure: the relationship of the supply and demand for goods. Thus, this week, Business Week dropped from its Figures of the Week tabulation (Page 11) the Business Week-Annalist Cyclical Commodity Price Index. Of the index's six components, three are fixed—steel scrap, zinc, and lead, and a ceiling has been put on a fourth, hides. The only two free to move are silk and wool, and the index thus becomes a measure of silk and wool fluctuations, rather than a sensitive indicator of the pulls and pressures of over-all supply and demand. Hence, its utility is strictly limited, for what silk and wool are doing can best be determined by following silk and wool quotations directly.

Wage Control

Canada's law freezing wages with a blanket bonus adjusted to change in cost of living arouses wide interest.

Your Government desires to avoid the vicious spiral of inflation. To do so it is curbing price increases; rents are controlled; profits are restricted and highly taxed. But this is not enough. The effect of these controls would be offset if no control were placed on basic wages.

So began advertisements which appeared in newspapers throughout Canada last weekend and posters which appeared in banks, post offices, and on street corners from Vancouver to Halifax.

They announced a wartime wage-control program for the Dominion that is getting attention, and will be cited as an example for action, as far south of the border as Washington.

• **Bonus Scheme**—The plan which Ottawa's hard-working Department of Labor had evolved was simple. Wages in all defense industries are frozen at present levels for the duration of the war. But to make this move palatable to Dominion workers, who are already faced with an 8% jump in living costs since the outbreak of the conflict, Canada's labor authorities in the government have set up a mandatory and automatic wage bonus scheme which will rouse the envy of Leon Henderson and



Despite his smile, William L. Mackenzie King, Canada's Prime Minister, was genuinely worried this week over soaring U.S. prices which threatened the Dominion's whole system of voluntary price controls.

other Washington officials charged with the responsibility for keeping the United States' price structure under control.

The bonus is not a wage increase. It will rise and fall automatically with living costs. It is the same for all wage-earners whatever their weekly pay (with a few exceptions covering children and part-time workers). It amounts to 25¢ a week for each 1% increase in the official Canadian cost-of-living index above the August, 1939, level. Whenever the cost of living begins to fall, the bonus will—according to plan—shrink at the same rate.

• **Quarterly Reviews**—The bonus situation will be reviewed every three months but wage adjustments will be made only when the cost of living has changed as much as 5%. Since living costs are now nearly 8% above the August, 1939, level, initial adjustments will be made at once to cover that rise.

Though Canada has been in the war since September, 1939, economic conditions have pretty well paralleled those in the United States. Business in both countries is well ahead of 1929 levels.

Employment in both countries is at record totals. But Canadian prices have soared higher since the outbreak of the war and the Dominion's 8% rise in the cost of living is more than twice the jump in the United States figure, though the latter's rate of increase has been more rapid in the last few weeks.

Watching the rise in wage income and the boom it is creating in retail trade, Canadians seven months ago took their first bold step to cope with the problem. An Order in Council "urged" a voluntary freezing of wages in the defense industries and proposed the bonus plan. It was that voluntary plan which Ottawa this month made both automatic and mandatory.

• **Wages and Profits**—Any suggestion that Canadian labor is being asked to carry an undue share of the financial burden of the war will encounter the fact that Dominion taxes on corporation profits range from a minimum of 40% on total profits to a maximum of between 80% and 89% of excess profits. In 1939, such taxes amounted to about \$78,000,000. This year they are expected to yield \$385,000,000, which is considerably more than Canada's total dividend payments in any recent year. Then, when profits are paid out as dividends, they are subject to further heavy taxation under the personal income tax.

Despite the forthright move to control wages, Ottawa has little confidence that it can keep the broader price problem under control without close co-operation from the United States—a topic of discussion when the recently-appointed members of the Defense Economic Committees of the two countries met for the first time in Washington this week.

• **Border Price Problem**—The trouble in the bacon market is cited as an example of the effect of divergent price policies in the two countries.

Canadians are under contract to supply Britain with 223,000,000 lb. of bacon a year during the war. This leaves only a limited supply to cover home demand despite the stepup in production. But early in May the price of bacon in the United States rose so far above that in the Dominion that Canadian farmers could sell across the border, despite the foreign exchange differential of about 12%, and the Canadian Bacon Board was forced to up its prices in order to secure sufficient supplies to fill the British demand.

This slowed the sale of hogs south of the line during May, but by June, prices in the United States were again so high that the shipment of hogs to American packers was resumed. Compared with the export of 546 hogs in the last week in May, shipments during the last week in June soared to 2,341. The Bacon Board has again upped prices but the problem is now becoming one for inter-country debate.

Can Silver Ease Metal Squeeze?

Politico-economic foes of Uncle Sam's subsidy program see chance to draft idle hoard to substitute for tin, despite price differential. Solder offers most interesting possibilities.

Tin sells for a bit over 50¢ a lb. Copper goes at 12¢ a lb. Silver brings 35¢ an oz. (Troy), or \$5.10 a lb. (avoirdupois). Yet so critical is the supply situation in tin and copper—in common with almost all metals—that there is agitation this week for substitution of silver in many uses, even though the economy of the competition may be quite unjustifiable.

There's one metal shortage problem which seems absolutely to defy solution. Goals are set, production is stepped up, and by the time the desired output is attained the demand already has gone on ahead to undreamed-of peaks.

• **Who Could Have Said?**—Aluminum is the classic example. Production men are all too familiar with the squeeze in this metal, and even the housewife will have more than casual knowledge of it after the roundup of old pots and pans scheduled to get under way Monday. Yet who could have said, looking at 1939's all-time record output of 329,000,000 lb., that today we would be producing at the rate of 700,000,000 lb. a year after shutting off virtually all aluminum from civilian use. And we still aren't even half way to the new goal of 1,600,000,000 lb. a year, just to meet defense needs, mainly for aircraft.

• **Zinc Requirements**—Almost as familiar is the story of zinc. Peak requirements in the past rarely have run over 50,000 tons a month. Today we have reopened and refitted smelters closed as obsolete, we have built and are building new refineries, and production is running along between 65,000 and 70,000 tons a month. Yet supplies still are so short that they are being rationed with the greatest care and a pool has been set up to meet emergency requirements of defense industry.

In this situation, the ubiquitous tin can emerges almost as saboteur, and copper, of which we normally produce a surplus, is critically scarce even after imports running to huge totals. Small wonder, then, that jealous eyes are being turned to the idle hoard of silver accumulated under the Silver Purchase Act of 1934, much of it stored in the new vaults at West Point.

• **Electrical Uses**—Superiority of silver in certain types of electrical contacts long has been recognized, but price differentials usually have precluded its use in any but specialized applications. Even under the guise of national defense, silver couldn't get far as a competitor of copper, price aside. Our entire stock of silver comes to some 88,000 tons, and we produce that much copper

from domestic ores in a single month.

When it comes to tin, however, silver has a better chance as a competitor. In the first place, tin is selling at a little more than four times the price of copper. In the second, our annual requirements of tin don't exceed 75,000 tons whereas current estimates call for 1,500,000 to 1,750,000 tons of copper. Moreover, this hemisphere is capable of producing copper in the required totals, but Bolivia, sole source of tin in any volume in the Americas, is hardly rated above 30,000 tons a year by the most optimistic and has no smelters. Finally, our tin smelter to turn out 18,000 tons of the metal from Bolivian ores, will not be in operation for perhaps eight months, and there remains the problem that these ores are difficult to refine.

• **"All-Out Substitution"**—Bolivia, none the less, could loom large in our defense picture. The National Academy of Sciences has just reported to OPM that "by all-out substitution in every possible line . . . it is believed that at least three-quarters of the tin ordinarily used could be replaced." Point of this statement is that the one-quarter still

needed could come readily from Bolivian ores. But the Academy of Sciences warns that all-out substitution would involve "construction of much special equipment, and at least temporary hardship."

If, for example, our can industry should be forced to widespread use of black plate, there would be a need for vast quantities of new welding equipment because tin plate is soldered and black plate cannot be without an undue amount of preparation. Moreover, there would be an enormous quantity of spreading and baking equipment for the lacquer which would have to be used to protect the black sheet from rust and corrosion.

• **Coating Black Plate**—In addition, coating tin with lacquer is one thing and coating black plate is quite another. Porosities in the lacquer will probably not match the porosities in the tin coating, so that one lacquer layer is usually sufficient even though some beer cans use two just to play safe. With black plate, two coatings would be almost essential for safe handling of fruits, vegetables, and meats with an acid reaction. Alkaline foods and non-corrosive non-edibles might get by with a single coating.

Can companies are working closely with OPM, but their spokesmen are a bit intolerant of some of the noise that is being made about tin. Says one, "There is actually no shortage. Every month there is more tin in this country



NIGHT ASSEMBLIES

One of the most dramatic examples of the speedup for defense in industry is the night assembly line outdoors at the Lockheed Aircraft plant in Bur-

bank, Calif. Under the big arc lights, more than 12,000 out of Lockheed's 29,290 employees turn out P-38s, or "Lightning" interceptors, and Hudson bombers for the U. S. Army Air Corps and the British Royal Air Force.

than the month before. It is inconceivable that it should all be cut off." Yet the markets, which may be unduly jittery, tell a story of uneasiness which is reflected in the rise to above 53¢ a lb. The fear, of course, is that Japan will move south and menace tin shipments from Malaya and the East Indies.

• **Other Containers**—Tinplate is the biggest user of tin (45%-50%) and, though the can companies don't like the idea of the competition, glass, ceramics, waxed paper cartons, bags of chlorinated rubber, and other containers can take up some slack. Already the can companies are making cans for oils, dry materials, etc., with a tinned body and tern plate bottoms and tops.

Soon vacuum-packed coffee will be coming in cans with tin bodies and enameled tops and bottoms. Enamel is not porcelain but really a synthetic organic lacquer similar to that used for present can linings, but with different pigments added for color and to cover the black sheet. Tops and bottoms are rolled on with special machinery and require no soldering. Air is excluded by a small amount of tasteless, odorless latex rubber compound rolled into the seam. This method of coffee canning will save an estimated 17,000,000 lb. of tin a year.

• **Silver in Solder**—In solder, second largest user of tin (20%-25%), appears one of the best opportunities for silver competition. Solder normally contains about half lead and half tin. Research indicates that a solder containing 2½% to 6% silver in place of tin could be used successfully, and a 2½% silver solder could compete with the 50% tin item on volume-for-volume cost. A 6% silver solder, however, would cost substantially more.

Some new equipment would be necessary for silver solder, however, because it would have to be worked at temperatures 100 to 200 degrees higher than standard solder. This would not affect the casual solderer; he could heat his iron to a higher temperature pretty easily.

• **Electrical Irons**—It would, however, affect seriously operations using electrical irons, as most of them are thermostatically controlled to cut off current before they hit a critical temperature.

As to babbitt metal, using 7%-8% of our tin requirements, it is fortunate that modern babbitt specifications call for a thinner coating of the metal supported by a stiff bronze or steel backing. For many uses, a lead babbitt containing no tin can be used. On the other hand, as more and more auto engines go from aluminum pistons to iron or steel, the heavier bearing pressures involved may call for more babbitt—and antifric-tion bearings (at even higher cost) may replace babbitt bearings.

• **Toothpaste Tubes**—As to foil and tubes, aluminum would be the natural substitute but aluminum is far scarcer than tin. For items like toothpaste, lead

will be used with a pure tin coating in contact with the paste. Meanwhile, there is strong agitation for a shift from paste to tooth powders which can be packaged in glass.

When it comes to bronze, which takes about 6% to 8% of our tin consumption, there is a comparatively new wrinkle. "P-M-G" alloy, containing copper, silicon, and iron, was developed by Vickers in England and brought here by Phelps Dodge. P-M-G, when added to copper, makes an alloy which entirely takes the place of standard Admiralty bronze as used by our Navy and the British. Physical characteristics are practically the same—edge may go to P-M-G—and machinability is identical.

• **Controversy**—Agitation for use of silver is surrounded with no end of political and economic controversy. Those who howl that mining of subsidized silver is diverting labor that might be used for critical metals forget that most of our silver output is the by-product of other commoner metals. Criticisms of the silver program are motivated by inflationary aspects of the operation rather than by any desire to see our silver hoard used to replace tin. And, in the final analysis, the world produces little more than 8,000 tons of silver a year compared with 180,000 tons or more of tin, and the United States alone will turn out close to 1,100,000 tons of copper this year.

Oil Crisis? Not Yet

Gasoline stocks increase on seaboard, but test will come later. Meanwhile, industry makes the most of existing facilities.

Decisions on methods for meeting the threatened shortage of gasoline and other petroleum products in the Northeast (BW—Jun. 14'41, p18) depend on a remaining imponderable: How many more tankers are to be requisitioned for British aid? The shortage in transportation (there are plentiful supplies) was caused by the diversion of 50 tankers out of a fleet of 260 shuttling between the Gulf Coast and the Northeast. Talk of further shifts persists. Latest is a report in Washington that the British have asked for 17 additional tankers.

While the industry drives ahead on plans to plug the existing gap, some executives take time out for pertinent questions. They would like to be sure that Washington officials weigh carefully further British requests for tonnage, that tankers under the British flag are doing their full share of war duty, that operations of the first 50 tankers are examined as to efficiency (a dozen or more tankers are said to have come into a port at one time with consequent



CARTEL FOR WHEAT

Spurred by wartime disruption of wheat marketing, representatives of leading exporting nations and one of the biggest importers, the United Kingdom, are conferring in Washington on what to do now and what to do later to minimize the post-war

shock. At the first meeting (seated, left to right) were H. F. Carhill, Britain; F. P. McDougall, Australia; George H. McIvor, Canada; (standing) Leslie A. Wheeler, United States, and Anselmo Viacava, Argentina. Looming large in the conversations is the often-discussed, never-successful idea of a world cartel to govern marketing.

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delays in loading). Evidently the urge for realism is making itself felt. It is understood that the British request for 17 more vessels was met with a friendly but official, "Let's wait awhile and see."

• **Ickes' Crackdown**—Oil-Coordinator Harold Ickes is attacking the oil problem with force and fury—and publicity. He urges a crackdown on wasteful motorists who drive smoky oilburners or employ "jackrabbit starts"—Washington police responded with 52 arrests last week—and at press conferences he harped on the theme of rapidly dwindling stocks on the East Coast. Which provoked one reporter to wisecrack, "What this situation needs is not a gasless Sunday, but a gasless Ickes."

• **Stocks Increase**—The reference to dwindling stocks was immediately jumped on by oil industry statisticians, who pointed out that reports showed stocks to be growing rather than dwindling. Figures reveal that East Coast gasoline stocks rose consistently between May 3 and June 28, increasing from 20,787,000 bbl. to 22,888,000 bbl. This was only 155,000 bbl. under the comparable week of last year. Stocks of diesel fuels and domestic heating oils also rose between the two dates, while the residual fuels (burned in big power plants, ships, etc.) were lower. East Coast gasoline production (1,645,000 bbl. for the week ending June 28) was ahead of last year.

However, the coordinator may yet be able to say, "I told you so," for the June 28 figures are too early to reflect the full shock of the tanker diversions. Subsequent reports are expected to back the Ickes statement on melting stocks. He warns that by the end of July shipments will be 250,000 bbl. a day short of the amount necessary to take care of consumption (which even in April was running 14.5% ahead of last year). By September, he says, the shortage may be acute.

• **Quick Adjustments**—Emphasis of both the government and the industry is on shifts and adjustments that can be made quickly in existing facilities. On July 3, the President signed the load-line bill permitting the heavier loading of tankers—a move that will add 30,000 to 40,000 bbl. daily to Gulf-East Coast deliveries. A tanker is being picked up here and a tanker there. The Navy Department is turning back two of its big, new oil carriers for East Coast service. Three tankers formerly on the coast-to-coast trade also will be used there. A seized German tanker will be available when repaired.

In Chicago last week, a 15-man committee was formed to assure maximum service from existing tank cars. It will function under Defense Transportation Commissioner Budd, probably with a paid director of tank car service as its operating head. Main object will be elimination of wasteful practices, espe-



The Atlantic Refining Co. tanker W. C. Yeager, which slid down the ways at the Sun Shipbuilding Co. in Chester, Pa., last week, may be one of the last tankers to get a sea launching—if the oil industry carries through its new and ambitious plan for starting a cooperative tanker-building program. Because no ways or labor are available at coastal yards, oil executives plan to build their tankers inland. The construction plant would be located on a stream with at least 7 ft. of water, and when tankers were launched they would be put on pontoons and floated down the river. Forty-eight tankers are at present scheduled to be built—the first four of them taking about fifteen months (including construction of the plant), and four being turned out every month after that.

cially time lost in unloading. Estimates of idle tank cars have been scaled down from an original 20,000 to something over 15,000 and doubt has been cast on their claimed ability to deliver 200,000 bbl. daily.

• **Standard Oil Example**—Standard Oil Company of New Jersey is setting an example for the industry by announcing that it will bring into use immediately 1,400 tank cars and that it will not pass along the extra transportation cost to the consumer. It costs 53¢ to bring a barrel of East Texas oil to New York by tanker, 67¢ by pipeline, \$2.37 by rail. There is talk of reduced rail rates for the duration of the emergency.

A reshuffling of existing pipeline services will give some immediate aid but major projects can't be completed in time for the impending emergency in the Northeast. On Monday the Senate

Interstate Commerce Committee approved the House Code bill giving the right, opposed by the railroads, of eminent domain to pipelines.

• **Lines Await Signal**—Fast action on this bill would afford some timely relief in that it would allow completion of the almost-finished Southeastern Pipe Line (gasoline) from St. Joe, Fla., to Chattanooga (BW—May 31 '41, p. 18). Counting on passage of this measure, Plantation Pipe Line Co. signed a \$3,500,000 contract on July 12 for a gasoline line from Baton Rouge, La., to Greensboro, N. C., to be completed Dec. 31.

While waiting enactment of the Cole bill, the industry narrowed its plans for emergency pipelines between producing fields and the Northeast (BW—Jun. 14 '41, p. 18). As revised, the gasoline pipeline would be eliminated and a 24-in. crude line built from near St. Louis to the New York-Philadelphia refining district. It would draw supplies not only from East Texas but from other Texas fields, Oklahoma, Kansas, and Wyoming. Cost would be around \$68,000,000, and a year would be required for construction.

• **Elastic Schedules**—One reason for the concentration on a two-foot crude line is the flexibility it allows in adjusting output quickly to market demands. There was a fixed relationship between the production of gasoline, fuel oils, etc. until the advent of cracking into refinery practices back in 1913. Cracking (use of heat and pressure to produce gasoline from heavier components) made for elastic schedules. Thus the eastern refiner, with his delivered crude to work on, can adjust his sights to the weather.

If there is a long, hot autumn demanding more gasoline, he can crack his kerosene, gas oil and other heavy products until his average crude gives him 45% in motor fuel. Contrariwise, if it turns cold and severe after the Labor Day driving peak, he can cut down on the percentage of gasoline in his run.

• **Possible Savings**—It is estimated that the equivalent of 35 tankers of 10,000 tons each can be saved by maximum use of existing facilities plus immediate additions. Unless there are further diversions, the peak of the tanker shortage is expected to be 64, and the time late this year. If the railroads make good on their claims of tank car performance, they will add the equivalent of 25 tankers. The total saved (60) would enable the Northeast to squeeze through the next nine months while new tankers and pipelines were being completed.

Cooperation by motorists and homeowners in saving gasoline and fuel oil would be needed. This is the goal toward which the energetic Mr. Ickes and cooperating executives in the industry are striving.

Rush for Tools

Harried today, the machine tool industry has to think about tomorrow. Priorities change is only one of many problems.

The machine-tool industry is now doing a business of more than \$60,000,000 a month (half its total for all of 1938). In the fiscal year that began July 1, its companies expect to produce close to \$1,000,000,000 of machines. They are scouring the country for outside sources of subcontracting work to help them keep up with the demand. At the same time, the government is regulating the supply by rationing machine tools to users. And, while all this goes on, the industry is beginning to worry about its future.

• **After the Peak**—To outsiders such worries may seem unreasonable, but the machine-tool manufacturers find good reasons why nightmares are mixed with their dreams. For one thing, they figure that they are scheduled to slide off their production peak much earlier than most other industries—those industries that will make the munitions of war on the machines they themselves are turning out. Admittedly, a prediction of machine-tool operations now is largely guesswork, but there are a few things to go on. One is that, so far, no big defense job looms up beyond the bomber and lease-lend programs, and the machine-tool makers' production for these programs should be pretty well cleaned up by next July 1. Unless new and staggering armament projects are piled on top of these, an end of billion-dollar years is already in sight.

After all, says the industry, you can't continue to build plant capacity forever; the time comes, sooner or later, when you get off that and onto the main job of making the munitions for which the machines are being ordered. Already, it is noted, all companies in the industry aren't under equal pressure; some are in a position to quote deliveries as early as October or November.

• **Long-Term Job**—So, while machine-tool makers listen to the cry to push up production, they are thinking about the probability that machine-tool demand will drop off from its amazing peak soon after the middle of 1942—and much sooner than that for some segments of the industry. From there on, they expect it to stick at a lower point—though still on a high plateau—for “the duration,” since, after the initial tooling-up scramble has ended, there'll be a continuing job of plugging up the weak points in the munitions lines, with higher-production, lower-cost machines.

• **Quick Change**—While the machine-tool men think about future jolts, they

have some current ones to deal with. One came last week when the priority rating system under which they make deliveries was completely changed (BW—Jul.12'41,p8). The change meets their complaints about the difficulty encountered in deciding which of several defense contractors with the same rating (such as A-1-a) should be favored with early deliveries. It does this by setting up a “master preference numerical list” showing the “urgency standing” of each contractor in each priority classification and having the list revised each month. However, the change meant every machine-tool builder had to rejuggle his production schedule-board—and seemingly, he must rejuggle it again every 30 days.

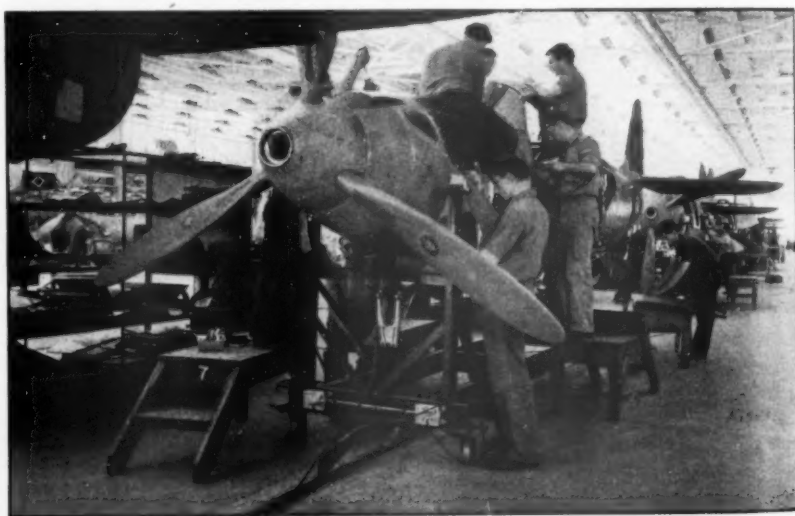
Meanwhile, orders for the industry's biggest defense project—the new bomber program, requiring almost \$500,000,000 of tools—are coming out in fair volume. Thirty per cent of these tools must be installed by next March, all by July 1, 1942. Lease-lend orders, which will involve at least 25,000 machine tools, perhaps a great many more, have been slow in materializing. Superceding in urgency even the bomber orders, are those for plants making anti-aircraft equipment, and the demands of the small-arms ammunition factories are also near the top of the list.

• **New Entries**—Recently, the pressure on the machine-tool builders for further expansion of plant capacity has given way to pressure for more intensive use of subcontracting. The Tool Section of OPM has made a thorough study of metal-working facilities around the country to locate new production sources for parts, subassemblies, or com-

plete machine tools. New entries in the business include Mohawk Carpet Works, Amsterdam, N. Y., making milling machines; Fisher Body Division of General Motors, building Liberty planers; American Can Co., with a variety of machine-tool work in its plants (its Cincinnati factory is reported to be working for several local machine-tool companies); Westinghouse, reaching over from the power industry; Hoe and Miehle, from the printing press field; Draper Co. of Worcester, Mass., from manufacture of textile machinery. New companies have started machine-tool production exclusively; some formerly in the field have come back to it.

Meanwhile, firms hard-pressed for machine tools are being urged to consult the OPM Tool Section's list of some 12,000 pieces of used equipment available from dealers. (But there's talk in the industry that, so long as Uncle Sam is paying the bills, some defense concerns won't be satisfied with anything less than the most up-to-date machines, guaranteed to provide low-cost production of peacetime goods after the war.)

• **Confused Estimates**—One of the headaches cited by machine-tool builders is that caused by manufacturers, new to defense production or anything like it, who have inaccurate and often highly unreasonable ideas of the kinds and quantities of machine tools they will need. The industry says that the best job of measuring machine-tool needs that it has seen so far is that of the Army Air Corps in specifying requirements for the bomber program; it didn't hit the bull's-eye, but wasn't far from it.



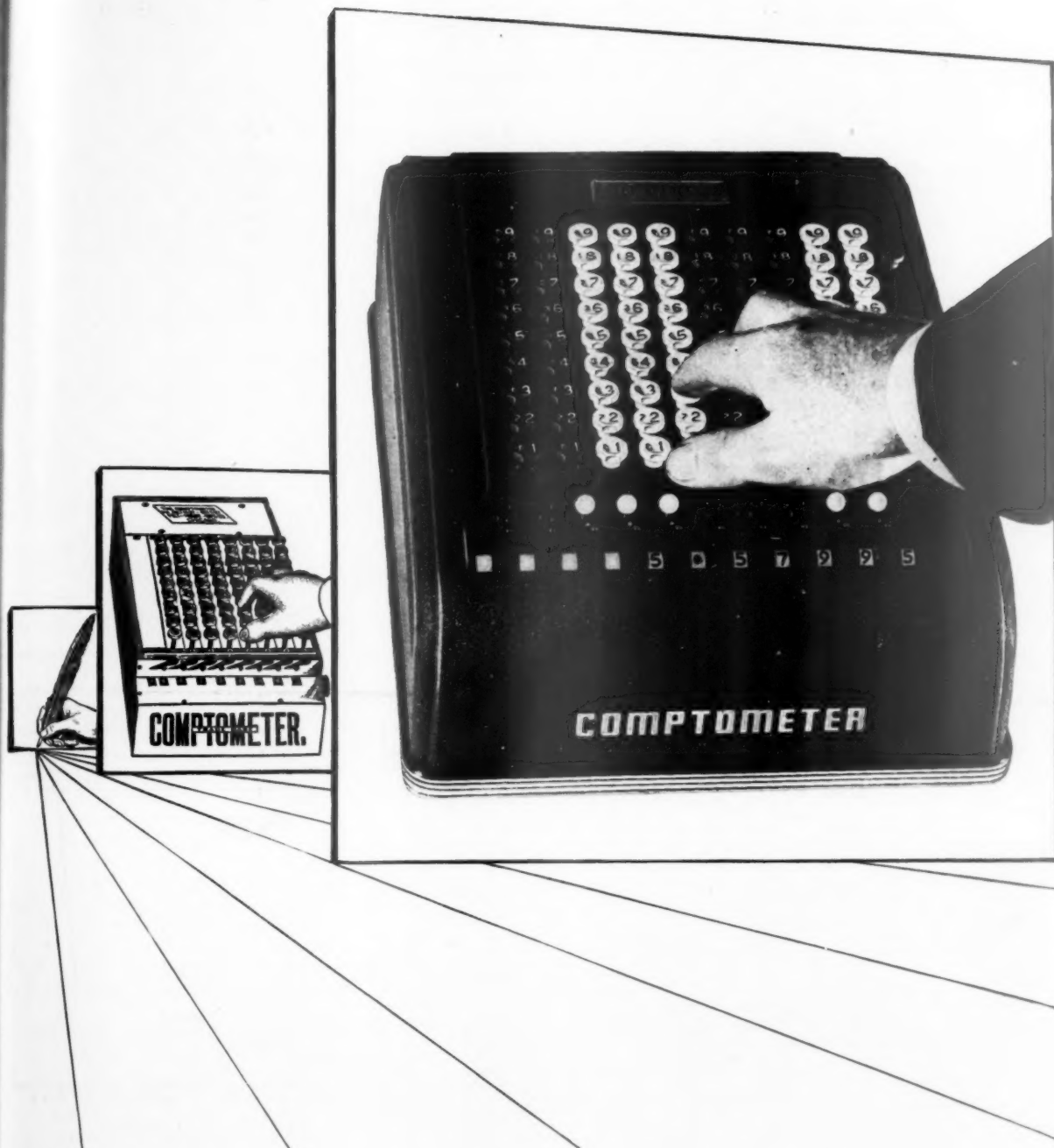
CONVEYORIZED AIRACOBAS

Airacobras for the U.S. Army Air Corps roll off conveyORIZED production lines in the Bell Aircraft Corp.'s new assembly plant at the Niagara Falls (N. Y.) airport. Drag chain conveyors

in the floor pull fuselages down the final assembly line on movable jigs. Two of these conveyORIZED production lines are now in operation; two more, already installed, will soon begin to move. Preliminary fabrication is still centered at the Bell plant in Buffalo.

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PROGRESS AND PROFITS

There's more to the caption of this advertisement than mere alliteration.

There's the fact that, in almost every instance, those business and industrial concerns which are quickest to recognize progressive change, and adapt themselves to it, are the concerns

which consistently show the highest profits.

There's the fact that yesterday's production methods are almost as obsolete as yesterday's military tactics. And that goes for figure-work production methods—where progress has been less spectacular but no less real.

Comptometer methods are an integral part of "Comptometer

Economy" in the handling of vital figure work. They are as modern as the new Model M Cushioned-Touch Comptometer. Together, methods and machine handle *more figure work in less time at lower cost.*

• • •
Felt & Tarrant Manufacturing
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If you use water or water solutions anywhere in your plant this message is for you...

In hundreds of plants, large and small—in many different industries—thousands of dollars are being saved every day in improved product quality...in higher plant efficiency...in reduced corrosion...by controlling pH of water solutions.

Investigate what BECKMAN pH CONTROL can do for you. Chances are there are numerous places in your plant where you can make unsuspected savings—important savings—through BECKMAN pH CONTROL. Our research staff will be glad to work with you in making recommendations for your particular plant operations. This service is free and entails no obligation.

"WHAT EVERY EXECUTIVE SHOULD KNOW ABOUT pH"—...a new booklet just off the press, tells facts you should know about pH—what it is, how it is used. Send for your free copy today!

NATIONAL TECHNICAL LABORATORIES
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WORLD'S LARGEST MANUFACTURER OF GLASS ELECTRODE EQUIPMENT

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From the bottom up...
PERSONALIZED SERVICE!

Why is The Lexington recognized as "New York's Friendly Hotel"? Look to the elevator operators for the answer—for they typify the spirit of the entire staff! Hand-picked, they are "on the way up" in this hotel...future executives. And they make personalized service apparent to every guest. Find out yourself by stopping here. Rates from \$4.

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Your Vacation City

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NEW YORK'S FRIENDLY HOTEL

DC-3s to Britain

Airlines scrape up 12 more transports for transfer under Lease-Lend. Bad publicity over deal kicks back on British.

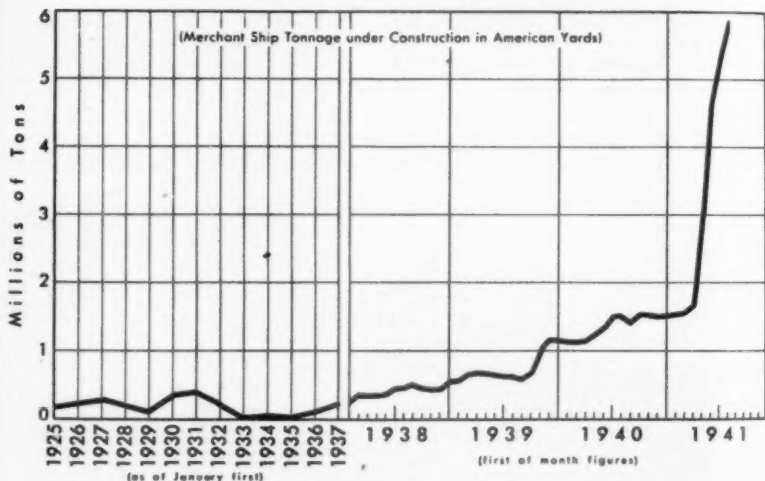
Opinion in Washington is that the airlines have done an excellent job of keeping their tempers and holding their tongues—for, faced with the biggest demand for air travel they have ever had, they have not only seen their hopes of expansion go winging out the window (BW—Dec. 7, 40, p8), but they have had to turn over transport planes to the British under the Lease-Lend Act. The latest batch of 12 planes to be transferred were just about all they could spare, even according to the Department of Commerce, which on Presidential order tried to find 24 planes for the British.

The lines turned over these 12 more DC-3 transports (standard two-engine equipment for most commercial runs) to the British at an average price of

\$100,000, a figure that is calculated to cover replacements—when and if replacements can be secured. Up to now, Britain's total take of two-engine planes has included: last year, 43 planes, mostly DC-2s, predecessors of the DC-3 model, and, earlier this year, 20 planes, mostly DC-2s and Lockheeds, a smaller model. • **Administration Off Hot Spot**—The Administration, under great pressure for more planes, has faced much unfavorable comment in rounding up this commercial equipment for the British, since maintenance of airline equipment and schedules has been considered as necessary to national defense as maintenance of other forms of transportation. And, shipment of critical defense materials and parts by air, is becoming increasingly important (page 22). But the Administration has got off the hot spot, partially, by tentative promises that no further demands will be made on the lines, barring an emergency, and, partially, because the bad publicity has bounced back on the British.

In the first place, the British are criticized for not anticipating their transport needs. Last year, Secretary Morgenthau, acting as liaison man for British pur-

WHY SHIPYARDS MUST EXPAND



Data: American Bureau of Shipping.

© BUSINESS WEEK

With a record total of 5,906,795 tons of merchant ships under construction (893 vessels) on July 1, and with the Maritime Commission already preparing to place orders for another 566 ships under the new \$1,246,650,000 just requested from Congress by the President, the Priorities Division of the OPM announced this week that construction materials for new ways being built at 20 shipyards will be given A-1-a preference ratings. Besides these merchant ships, 359 ves-

sels are under construction for the Navy, 199 of them destroyers. In addition to the new building program, \$160,000,000 has just been appropriated for expansion of repair facilities at yards along the Atlantic seaboard. Admiral S. M. Robinson also announced that 50% of existing repair facilities in Navy yards would soon be in use by disabled British war vessels, repair work on which has already slowed down the Navy's own construction program in some yards.

chases, urged them to order transports. Secondly, the British are suspected in the industry of putting the U. S. transports to use on their own civil lines which still maintain service between such points as London and Edinburgh, to Lisbon, and throughout the Empire.

• **Few Planes from Canada**—Further, the British have been open to criticism for not requisitioning more planes from Canada. Recently they did take two Lockheeds from Trans-Canada Air Lines, but Trans-Canada only recently received six new Lockheeds and announced new schedules. Claims that Canadian lines have added 22 new ships, however, have been denied even by U. S. airline executives. Moreover, the Canadian Ministry of Munitions and Supply has declared that at present there are only 19 commercial transport planes in Canada, 13 of which were built in 1938. The six new ones, the ministry said, were absolutely necessary to maintain service. Only one new run, between New York and Montreal, has been added to Canadian schedules.

The airlines, although they have refrained from public statements, have wanted the War Department and the British to convert Hudson bombers into transport planes, instead of taking the DC-3s. (The Army pre-empted more than 40 DC-3s, which had been ordered by the airlines, for parachute training and Army transport work.) The Hudson is a conversion of the Lockheed 14-passenger plane and it takes only five days to turn it into a transport. It takes about three weeks to convert a DC-3 into a troop transport and it takes even longer to convert the DC-3s that are sleepers. Between 100 and 200 Hudson bombers are awaiting delivery to the British; only explanation for the fact that some of them have not been converted is that the British are desperate for bombers and don't want to give up even a few.

• **What's Left**—Altogether, U. S. airlines are left with about 350 planes, nearly all DC-3s, and, so far, they have had to cancel only two flights—American Airlines trips 78 and 79, from New York to Chicago. Further cancellations will probably not be necessary, operators say, because they can take care of the gaps by keeping planes in the air a little longer every day. Average daily time of transport equipment in the air has been 10 to 11 hours. OPM has given airline maintenance every advantage in priority for parts and tools; consequently, no concern has been expressed over the safety factor, even if equipment is run longer.

Operators feel that if no more planes are taken, they can get along. By next spring, they hope that aircraft production will have reached a point when the lines can have plenty of equipment to handle regular and defense, as well as vacation, travel.

SHIPS' TONGUES THAT TALK **TONNAGE**

To maintain the nation's vital flow of ore, limestone, coal and grain, a huge fleet of Great Lakes freighters is providing the world's cheapest transportation. Nowhere are cargoes handled faster or more efficiently. And in this tremendous job HEWITT plays a vital part. Within the holds of ships and on docks, and on the self-unloaders that stick out from many of these vessels like great tongues, HEWITT conveyor belts are providing long, dependable, low-cost performance. Smooth service under rough conditions—couldn't you use it in your business? HEWITT distributors are listed in Classified Telephone Directories under "Rubber Goods" or "Belting." Hewitt Rubber Corporation, Buffalo, N.Y.



HOSE • CONVEYOR AND TRANSMISSION BELTS • PACKING
Industry has made HEWITT its largest exclusive producer of industrial rubber goods

Flying for Defense

Airlines do a spectacular hauling job to meet American industry's hurry-up demands for tools, parts, and materials.

The airlines continue to release statistics showing increases in air express as well as passenger traffic and playing up their importance to national defense. The other day they dished out some imposing figures from the Air Express Division of Railway Express Agency. Shipments of heavy industry products increased 108% in April, 1941, over April, 1939. This class of business, including aviation materials, machinery, automobile and rubber goods, hardware and implements, shipyard materials, and oil industry loadings, totaled 24,259 shipments during the month and weighed about 229,000 lb.

Shipments to and from airplane plants (mainly sub-assemblies, shortages, tools, instruments, and drawings) were up 287%, by far the largest increase.

• **Getting Down to Cases**—But there is more conviction for the layman in a handful of specific instances than in tons of tabulations. On Mar. 27, Air-cooled Motors Corp., Syracuse, N. Y., broke a gear on a bottleneck machine, and thereby halted a production-line operation on motors for airplanes and military trucks. F. L. Howard, purchasing agent, got on the telephone, located some new gears in Philadelphia. Exactly 4½ hours after the gears left Philadelphia, they reached the Aircooled Motors Co. plant.

• **Story of a Circuit-Breaker**—In January, the ITE Circuit Breaker Corp., Philadelphia, was constructing six large circuit-breakers to be used by the Bulldog Electric Co., Detroit, in a new defense plant for General Motors Corp. Then ITE received a telephone call from Washington: the Detroit plant was three weeks ahead of schedule, and how about completing the circuit-breakers? ITE put on the pressure, completed the units two days later. Immediately one of its officers called up American Airlines and asked to have these units shipped by air to Detroit.

A regular DC-3 air liner was ferried to Philadelphia from New York, and the 2,600-lb. consignment loaded aboard. Then the cargo was flown to New York and sent on successive regular trips by air express to Detroit. The entire shipment reached Bulldog Electric Co. at Detroit that same day.

• **Getting a Crankcase**—Another hurry-up record was set last winter, when Pratt & Whitney sent a technical expert by air from Hartford with some aircraft engine blueprints. He arrived at Detroit Friday evening, went over to Albion,



NEEDED FOR DEFENSE

At its Jacksonville, Fla., shops the Seaboard Railway is pushing the rehabilitation of old freight equipment (above). All over the country, equipment makers are turning out new rolling stock, as at the Schenectady, N. Y., plant of American Locomotive Co., which is trying to break production records on Alco-General Electric diesel-electric locomotives (right). Under the pressure of the defense load, all the railroads are after additional equipment (BW—May 17 '41, p28).

There's even talk of a giant \$1,000,000,000 car-building program for the whole industry which would take either one of two forms: a federal government car corporation, which RFC would finance and which would lease cars to the roads, or a car corporation formed by the Association of American Railroads—funds to be supplied by the RFC, the carriers, or both. The RFC has indicated it would supply any funds that the roads deemed necessary for such a project, but Loan Administrator Jesse Jones has declared he thinks the roads are already in "fair shape to meet any reasonable demands" and therefore don't need any-

Mich. on Saturday. On the following Monday he left Detroit for Hartford, along with an air express package containing a crankcase that had been cast over the week-end.

Examples of aircraft parts and tool shipments are plentiful. A large proportion of all express carried from New York and other eastern centers to the West Coast moves from parts manufac-

thing like a \$1,000,000,000 program. Some carriers, fearful of government participation in any such program, are inclined to agree with Jones. Another significant commentary on the railroad expansion program was made this week by Ralph Budd, defense transportation head, who argued that the program was falling down because of inability to obtain needed materials. However, the Office of Production Management three weeks ago gave freight-car builders priority rating A-3, putting them on a par with plane and shipbuilders (BW—Jun. 28 '41, p27).



turers to the big aircraft shops—typically Bendix and Curtiss-Wright to Douglas. The Bendix plant at South Bend, Ind., regularly air expresses between 40 and 100 carburetors a day—up to 800 lb.—to Pratt & Whitney at Hartford to keep the production line moving.

• **Special Schedules**—Chicago Pneumatic Tool Co. moves daily shipments of tools to the same consignee. Parts go

SPEEDING PRODUCTION

TO PRESERVE THE "AMERICAN WAY"



TANKS • GUNS • SHELLS • AIRPLANE WINGS • FREIGHT CARS

To speed production of these basic defense materials Pullman-Standard's plants and men have enlisted for the duration.

THE TRUE TEST of strength between the systems of free and forced labor and the ultimate decision between the American and the Totalitarian Way lie in the production performance of this country's key industries.

On May 28, 1940, when Pullman-Standard received its first order for defense materials, it was solely engaged in the construction of railroad and transportation equipment. Today, it is not only turning out one of the fundamental weapons of defense . . . freight cars . . . at the rate of one every 4½ minutes of the working day to speed production through our entire industrial system; but it is also continually multiplying its output of the following essential armaments:

TANKS: 28-ton tanks on a 24-hour schedule.

GUNS: Trench mortars and mounts, and carriages for the new 105 m/m howitzers rolling off the lines day and night.

SHELLS: forging and machining of six-inch

Transportation is the primary arm of National Defense and the freight car is the primary arm of transportation.

shells for the British Government; forging and machining of 105 m/m shells, and machining of 155 m/m shells for the U. S. Government, is proceeding on a 24-hour-day schedule in two mammoth plants.

AIRPLANE WINGS for bombers and transport ships will soon be produced in ever-increasing quantities.

This record of speed is even more reassuring when you consider that the factors which make it possible are characteristic of many of our great American industries. In Pullman-Standard's case these are . . . the know-how derived from 82 productive

years . . . expert knowledge of metals . . . capacity and organization to back that knowledge with millions of man- and machine-hours to quicken production . . . and engineering and research staffs capable of overcoming the uncharted problems mechanized war imposes . . . and finally, on armaments, the co-operation of 516 other manufacturing companies and 41 suppliers of raw materials. Negotiations are proceeding for expanding this program.

Loyalty and co-operation will bring victory for the American Way

One more thing—and that the most important of all—makes Pullman-Standard's accomplishment possible: the loyal and patriotic will on the part of every worker to make his an all-out effort in defense of his country. In this voluntary effort lies the demonstration that men trained in a free democratic system can out-manufacture, out-plan, and out-think the dictators. And, as long as that is true, free government shall not perish from the earth.

PULLMAN-STANDARD CAR MANUFACTURING COMPANY
CHICAGO • ILLINOIS

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regularly by air from Allison Engine Co., Indianapolis, to Illinois Tool Co., Chicago, for precision machining operations and when finished travel back by air to Allison.

All during the early winter, air express carried two bullet-proof gas tanks a day from United States Rubber Co., Detroit, to Douglas in Santa Monica. On some days larger lots moved by air, part of them in the passenger compartment of the ship.

• **Express from Akron**—The rubber companies at Akron regularly use air express to ship essential defense materials, largely to airplane factories. Ailerons were air-expressed twice last winter from Los Angeles to Dayton, Ohio, with considerable difficulty in crating and loading. Each shipment saved three or four days in the completion of military aircraft.

Last spring, during the Japanese flare-up, a Consolidated bomber previously intended for England was switched to Singapore. But it had to be armed before leaving. Air express carried belts and machine-gun clips from the Remington plant in Buffalo to Consolidated at San Diego, and the big ship flew west across the Pacific.

• **Aluminum Tubing**—On Jan. 11, 1941, a United Airlines DC-3 was chartered, all seats were removed, and 1,200 lb. of small aluminum tubing was flown from Pittsburgh to Burbank for some essential experimental work on military aircraft. Another United cargo charter came six days later, when a ship flew 2,753 lb. of ammunition for the British from New York to San Diego.

One of the most spectacular air express jobs also came last January. A tractor used for extending and grading the Naval air base field on Wake Island, in mid-Pacific, broke its crankshaft. A radio call to the mainland got a new crankshaft—709 lb.—rushed from the factory to the Chicago airport. From there it went by chartered plane to San Francisco, made a close connection with Pan-American's China Clipper. The tractor was back in service on the coral atoll in slightly less than a week after its breakdown.

Jeffrey Co., Columbia, Ohio, has air-expressed several large pieces of oil-well and mining equipment to points in Texas and Arizona where vital defense jobs are in process. There is a steady traffic in drawings, mail, heavy ship gear—and technical experts—from shipyards at Baltimore to others at Houston and San Francisco, and a comparable airplant-industry traffic from Hartford to Wichita, Seattle, and southern California.

• **Assisting the Bombers**—Bombers for Britain, ferrying from the West Coast, occasionally develop mechanical difficulties en route. The pilot lands, telephones the factory, and awaits repair parts by air express.

The palm for the most spectacular defense cargo job to date probably belongs to Canadian Airways, Ltd. Last September, C.A. took on the task of flying 500 tons of urgent freight across 105 miles of virgin bush country in Northern Quebec, from Beauchene to Lake Manuan, where a dam was projected to supply power for the new Arvida plant of the Aluminum Co. of Canada. The dam had to be finished before the 1941 spring freshet, and so the freight had to move before the October, 1940, freeze-up. The job was handled on schedule, and C.A. kept on carrying freight all through last winter—a total of more than 1,500 tons, including steam shovels, tractors, bulldozers, horses, oxen, and all the necessary impedimenta for a construction job.

• **Result:** The dam was completed in time, power became available—and the U. S. as well as Canada is now getting large quantities of vitally needed aluminum from this source.

So P.&G.'s Drafted

Shell-loading enterprise run by soapmakers is a striking example of way U. S. is enlisting managerial talent for defense.

A 35,000-acre shell-loading plant at Milan, Tenn., will soon be a completed monument to the government's policy of drafting managerial experience without regard to the product with which the experience was obtained. This plant, which is 65 miles north of Memphis, will be operated by Procter & Gamble, biggest of U. S. soapmakers. Between 7,000 and 10,000 workers will be employed.

Under the pressure of defense, the government has sought and obtained from many manufacturers products widely dissimilar from those which they



EXPANSION AT HOMESTEAD

The projected \$75,000,000 expansion of the Homestead (Pa.) Works of the Carnegie-Illinois Steel Corp. will take in an area (outlined above) now housing approximately 8,000 people, and containing 1,363 buildings—including 11 churches, 2 convents, 5 schools, 68 groceries, 28 saloons, a planing mill, a water works, a knife factory, a machine shop, and a bakery. The Homestead High Level Bridge, recently constructed in the area, will not be affected. Selection of this site for the expansion will link up the divided portions of the Homestead Works—the

buildings which mark the present extremity of the plant at the right, above; and the 100-inch mill, whose long black roof can be seen at the left. The expansion was tackled by Carnegie-Illinois at the request of the Navy Department, has been approved by the Office of Production Management, and was waiting Jesse Jones' approval early this week. Proposed equipment includes an open-hearth furnace, an armor forging mill, machine shop, slabbing mill, and wide plate mill. Products: armor plate, special treatment steel, heavy forgings, for Navy vessels. Capacity increase: 400,000 tons of ingots a year.

From the Pine Stump Comes a Restorative for Tired Rubber ★ ★

Another of the many ways in which Hercules products are helping to speed production and cut costs.

THE rubber in those worn, road-weary tires is only fatigued—not dead. Restoratives bring back most of the snap of youth . . . reclaim cast-off rubber for useful service. And this helps to solve one of today's pressing problems.

Important in the recovery of used rubber is Solvenol*, one of the many useful terpenes released by Hercules research from the oleoresin of the Southern pine stump.

Solvenol dissolves rubber and helps to reduce it to a soft, plastic mass . . . protects against the destructive effects of excessive milling and heat . . . and thus aids in making rubber useful again. Solvenol is also useful in other chemical process industries.

OTHER WAYS IN WHICH HERCULES HELPS: Years of Hercules research have developed chemical materials to help a wide variety of industries to speed up processes, cut

costs, produce new or better products. Some of these industries are protective coatings, plastics, paper, textiles, mining, construction, quarrying, metal foundries, film, meat-packing, cement, soaps, inks, linoleum, disinfectants, insecticides, asphalt, leather, rubber, essential oils, adhesives.

SOME PRODUCTS MADE BY HERCULES: Among Hercules products are chemical cotton and cellulose derivatives—nitrocellulose, cellulose acetate, and ethyl cellulose—each in a range of diversified properties, to solve many problems in plastics, finishes, and film. Also important among Hercules materials are turpentine, pine oil, terpene derivatives, rosins, rosin derivatives, resins, and rosin esters—and a wide array of paper-makers chemicals.

Write for information about Solvenol or any other Hercules chemical material. Address Department B-8.

HERCULES POWDER COMPANY
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Wilmington Delaware

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HC-125



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HERCULES

CHEMICAL MATERIALS FOR INDUSTRY

ordinarily produce, but only in a few instances has it sought to purchase management brains as in the case of Procter & Gamble. Other instances are Coca Cola and Goodyear, which will respectively undertake operation of bag-loading plants at the Childersburg, Ala., and Charlestown, Ind., munitions centers.

If shell-loading looks like a far cry from soap-making, then let it be noted that P. & G. did not turn to such an enterprise of its own initiative, but because it was willing to do what the Army wanted. Ordnance officials approached the management, explained that the final assembly operation in the making of shells required just the type of mass-production experience that had been accumulated by the company's production men in turning out millions of packages of soap per month. To all intents, the Army drew up details of the plan, and P. & G. said, "Yes, Sir."

• **Ahead of Schedule**—Officially designated the Wolf Creek Ordnance Facility, the plant at Milan is now so far along that builders can prophesy that some departments will be operating by Aug. 1, and the entire plant by December. This is several months ahead of the original schedule, but neither P. & G. nor the H. K. Ferguson Co., which is building the plant, takes much credit for the speedup. They say it was made possible by the Ordnance Department's departure from original plans asking a plant free of maintenance expense for 25 years. Changing to less durable types of construction increased the project's tempo.

Ordnance stipulated that a separate corporation handle the job. The Procter & Gamble Defense Corp. was accordingly set up, with \$1,000,000 paid-in capital, for this contract. It is a wholly-owned subsidiary of The Procter & Gamble Co., the parent. Therein its status is precisely that of the two major operating subsidiaries of the soap business, The Procter & Gamble Manufacturing Co. and The Procter & Gamble Distributing Co.

• **Hand-Picked Personnel**—P. & G. hand-picked from the regular personnel of its various departments and branches the men to operate the shell-loading plant, turned them over to P. & G. Defense Corp. for the duration. Plant superintendents, foremen, and other key supervisors, have for some months been on duty at other ordnance plants and arsenals learning the trade. Most of the men for the defense job have been taken from the supervisory and technical staffs of P. & G. departments of cost accounting, engineering and production, buying, transportation, personnel, and chemical research.

Officers of P. & G. Defense Corp., themselves the top executives of the parent company, selected Morton P. Woodward as the operating head at Wolf Creek with the title of general production manager. With a trained

staff, Woodward has already set up headquarters at Milan. He originally was a production man at Ivorydale, the home plant at Cincinnati. In 1934, when P. & G. bought out Thos. Hedley & Co., Ltd., Woodward went to England, where he supervised the building of two major plants. He came home shortly after the war broke out. In his mid-forties, Woodward has made an outstanding record in the manufacturing division of the business. He is precisely the type of mass-production-trained executive that the Army was angling for



DETROIT TANK ENGINE

First of the Wright 450-hp. engines to be produced in Detroit for installation in medium tanks is nearing completion in a test cell at Continental Motors Corp. The 9-cylinder, air-cooled engine will go into a Chrysler-built 28-ton tank. Fifty engines will be delivered by Continental this month. By October, Continental expects to be turning out 600 a month.

in drafting a soap company to make artillery ammunition.

Estimated cost of land and construction at Wolf Creek is \$13,000,000, and annual operating cost should be around \$24,000,000. P. & G. Defense Corp. draws \$285,000 for management services during construction, thereafter an annual fixed fee of about \$660,000. The company expects to spend the entire fee, sees no way to break even unless everything about the job passes off with improbable smoothness.

• **Willing, But Not Seeking**—The company's official attitude, however, is that if it is called upon by the government to take more of the same sort of work, it will do it willingly. But top managers frankly hope that, next time, someone

else will get the official nod. As for the profit possibilities in this type of job, it is obvious that what might be whittled out of a \$660,000 fee is insignificant to a company that consistently makes above \$20,000,000 a year selling soap.

At other points, of course, P. & G. touches defense in its normal manufacturing. In World War I, P. & G. was prominent in the munitions program as the nation's largest supplier of glycerine, a by-product of soap. Glycerine was then essential in explosive manufacturing, but the picture has changed. Synthetic products have been developed and glycerine no longer occupies its major position. However, P. & G. is No. 1 producer of cotton oil, through another wholly-owned subsidiary, the Buckeye Cotton Oil Co. Buckeye has 15 mills in the South and Southwest, and also is a large maker of chemical cotton (at Memphis). Before pressing the oil from cotton seeds, an oil mill removes the adhering fuzz. This is linters, of which 40% is of long enough staple for use as padding. The other 60% (or second cut linters) is raw material for making chemical cotton, which is almost pure alpha cellulose.

• **Military Demand**—In peacetime, chemical cotton goes principally into rayon, plastics, and quick-drying lacquers, with an almost incidental market as an ingredient for smokeless powder to be used in sporting shells. But smokeless is needed in military ammunition, and—for obvious reasons—this demand has soared in recent months.

To meet the military requirements while continuing to care for its regular commercial accounts, P. & G.'s Buckeye has nearly doubled the capacity of its Memphis pulp plant.

Buckeye processes none of this chemical cotton into explosives. But it is a fair guess that most of the cellulose it makes at Memphis will eventually reach Wolf Creek, duly fabricated by du Pont and other makers of propulsive powders.

Autos "for Use"

Survey attributes three out of four trips and half of mileage to necessity driving. Data given to OPACS, OPM.

Three out of four times that the average driver gets in his car, he drives to work in it or makes a business call—or maybe it is his wife, driving to the store or taking the kids to school. These and similar "necessity" uses accounted for an estimated 274,000,000,000 miles of driving last year—more than half the total mileage rolled up by America's 26,000,000 registered cars (see the chart on page 28).

Such facts from a study just issued by



WINGS FROM AN
oil well

You are looking at a new idea in airplanes—"the plane of the future" may be its direct descendant. It is *molded* out of a tough, non-corrosive, fire-resistant plastic, combined with plywood.

To make plastics workable, scientists at Shell's research laboratories produced *acetone* from a petroleum gas. Combined with acetone, a plastic becomes as workable as biscuit dough.

Oil "sprouts wings," or becomes glycerine or synthetic rubber, or enters the making of artificial silk or cosmetics . . . because Shell research scientists have performed amazing chemical feats with the molecules in petroleum.

Yet these accomplishments are incidental to their all-time job: the constant improvement of Shell fuels and lubricants.

INDUSTRIAL LUBRICATION is the pace setter for the new production schedules. Speed . . . more speed . . . yesterday's solution is seldom good enough for today!



SHELL INDUSTRIAL LUBRICATION

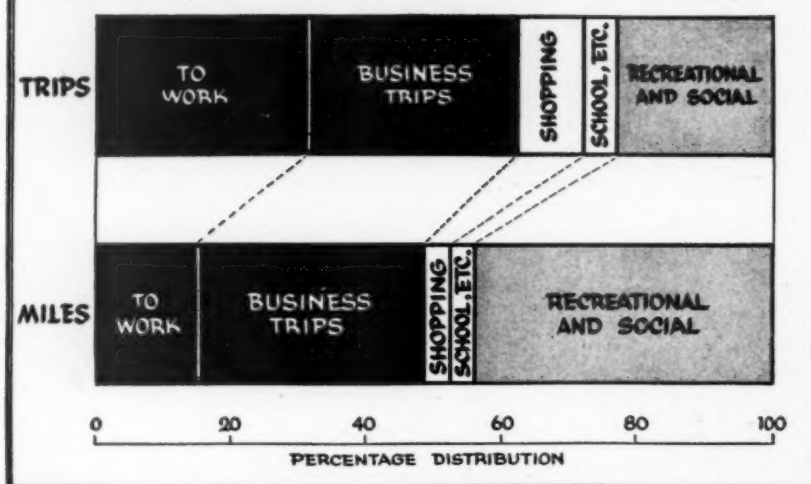
Shell's \$3,500,000 research facilities, manned by 821 scientists and assistants, exist solely for the purpose of creating better products and better methods. The revolutionary new Shell Turbo Oil is an example. In literally hundreds of instances, the recommendations of Shell lubrication engineers have eliminated "bottlenecks," increased production, lowered costs.

Before Shell industrial lubricants are offered to you, they are plant-tested—proved—under all kinds of actual operating conditions. And with the use of Shell lubricants, you are assured of the continued watchfulness of Shell men—a service that needs no prompting.

• • •

Are you quite sure that your plant has the benefit of all that is new in lubrication, as it develops? You will find a Shell man's recommendations entirely practical—and made without obligation.

MILEAGE AND TRIPS PER CAR BY TYPE OF USE



the Automobile Manufacturers Association, "A Factual Survey of Automobile Usage," may prove more effective than complaints from organized labor and dealer groups in dissuading the government from more drastic production cuts, higher taxes, or further restriction of installment terms.

• **Without Fanfare**—The study has been in preparation for more than a year, and was ready for distribution some time ago; it was held up, however, lest its publication be interpreted as an evidence of the industry's reluctance to go along with the production curtailment program when it was announced (BW—May 10'41, p17).

Even now the A.M.A. is not seeking wide publicity for its study, having held up a general release to the newspapers. The survey is, however, having circulation in high Washington quarters—OPACS, OPM, and other agencies.

• **What It Shows**—Significant findings, reported in the survey:

Only 4% of U. S. cars serve purely recreational purposes; at some time or other, all other cars are used for necessity driving.

In rural, unincorporated areas, necessity uses account for an average of 4,331 miles per car per year, or 65% of total mileage. In large metropolitan areas, comparable figures are 4,417 miles, or 56.7% of total mileage.

Six out of 10 cars are regularly driven to work in urban areas, 60% once a day and 14% twice a day; 70% of workers in car-owning families go to work by automobile.

Six out of seven automobiles are used for family shopping. Two-thirds of car owners do their principal marketing two or more miles from home. Two-thirds of all farmers, the people most dependent on cars for marketing purposes, could not get to present supply points without cars.

There are 11,844,000 persons living in 2,100 communities with no other form of transportation.

As of July, 1940, one car in four was nine years old or older, and these older cars

serve more necessity uses than newer cars. In the older car class, such trips account for 80% of trips and 60% of mileage.

• **Three Independent Surveys**—Groundwork for the report was laid by three independent surveys, which are in close agreement on major findings. One survey was made by the highway departments of six states—Connecticut, Georgia, Indiana, Michigan, Nebraska, and Oregon—by the method of distributing questionnaires to motorists during 1936–1939. A second survey consisted of road-use reports from 29 other states. The third survey was made with a national sample last winter by the Opinion Research Corp.

Lumber Ruling

Court declares defendants must stand trial for antitrust violations, denies motions to quash Denver indictments.

Almost all of the 240 lumbermen's associations, individual lumber and cement companies, and individuals indicted in Denver (BW—Apr. 26'41, p30) must stand trial on charges of violating the Sherman Antitrust Act. That was the ruling of Federal District Judge J. Foster Symes last week when he denied motions to quash the indictments.

• **Two Arguments**—Two chief arguments were advanced by defendants' attorneys. In the first place, Sherman M. Price of Chicago, representing the National Lumber Dealers' Association, argued that the government was seeking to stretch the antitrust act far beyond its rightful scope in instituting criminal proceedings against business men who "had banded together in a trade association to legally and rightfully further

their rightful interests by fair and reasonable means."

To this, Judge Symes responded: "... We cannot accept the defendants' definition of what 'fair and reasonable means' are. ... The scheme set out in this indictment can hardly be designated 'fair and reasonable' or 'reasonable,' as the courts have distinctly and repeatedly held.

"No group in any industry can arrogate to themselves the power to say that wholesalers and manufacturers ... may not sell directly to the consumer nor compete with the retailer, and thus interfere with the orderly flow of commodities. ... Nor may they decide who shall deal in building materials or at what price."

• **Claim Intrastate Exemption**—Another group of defendants, including the W. C. Bell Services of Seattle, Wash., and Mountain States Lumber Dealers' Association, argued through counsel that they were not in interstate commerce.

The court ruled, however, that "restraint or control imposed at the point of origin by wholesalers and manufacturers shipping a commodity in interstate commerce, directly affects the price at which the commodity is later sold by the retailer."

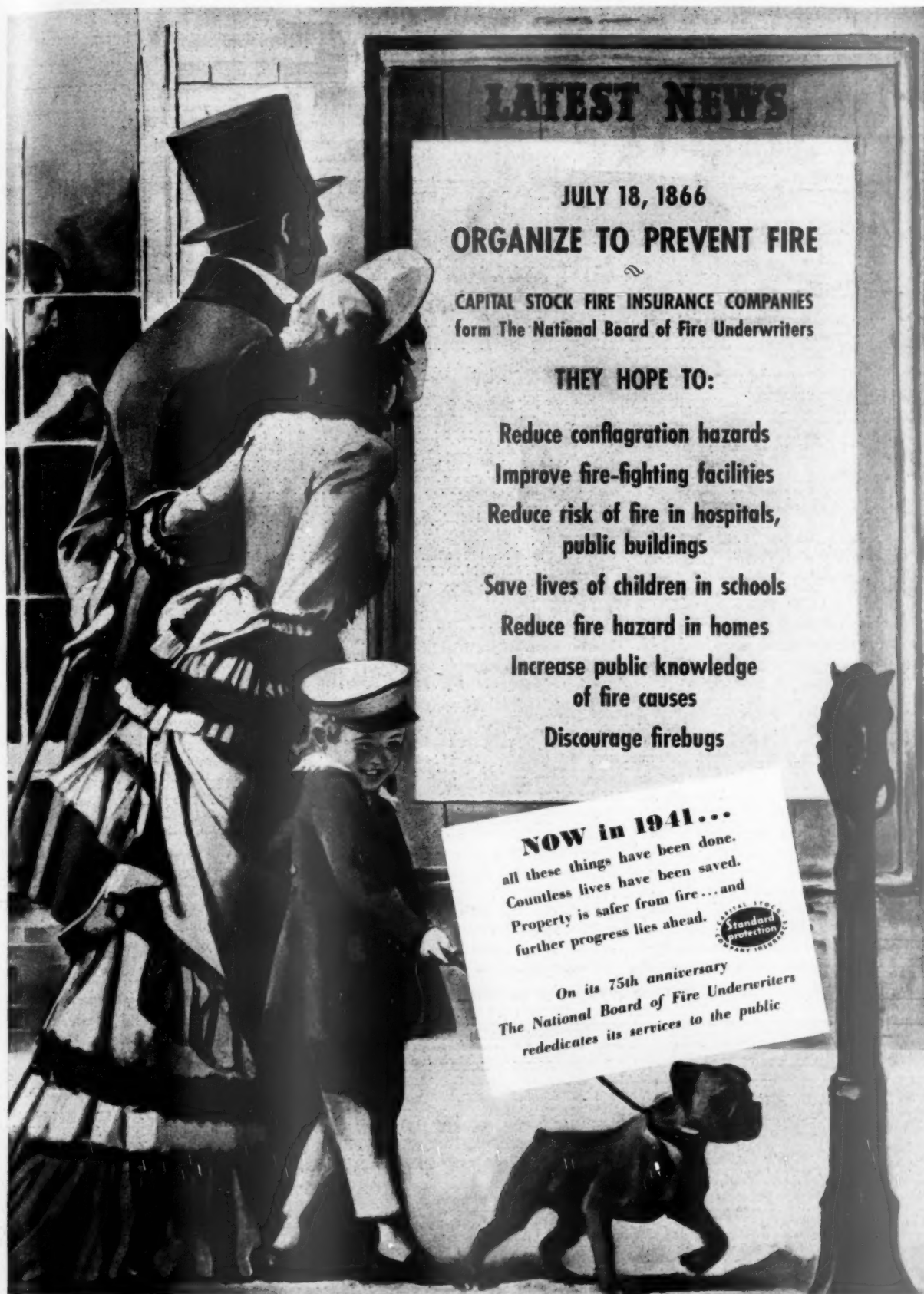
Some half-dozen smaller companies have pleaded nolo contendere, and a few defendants have been dismissed.

FIREBRICK FINES

Fines totaling \$37,000 were imposed by the U. S. District Court in Philadelphia last week on the American Refractories Institute, five firebrick companies, and seven individuals, all under antitrust indictments for alleged price-fixing activities. All defendants had pleaded nolo contendere to the indictments which were drawn up last March. The defendant companies, said federal attorneys, control 75% of the firebrick industry, which does a \$65,000,000 to \$75,000,000 annual business.

PRIORITIES MANAGEMENT

To handle the welter of details in connection with priorities, Allis-Chalmers Mfg. Co. has set up a new company administrative department known as "Priorities Management." General purpose of the department, made up of three men, is one of coordination and management—to act as a priorities "clearing house" for the company. Specifically, the department will take over such duties as presenting company problems concerning priorities to OPM and other government agencies; will coordinate and disseminate information on priorities for the company's other departments; will help determine shop schedules when there is a conflict between two or more jobs bearing the same priority rating.



LATEST NEWS

JULY 18, 1866

ORGANIZE TO PREVENT FIRE

CAPITAL STOCK FIRE INSURANCE COMPANIES
form The National Board of Fire Underwriters

THEY HOPE TO:

- Reduce conflagration hazards
- Improve fire-fighting facilities
- Reduce risk of fire in hospitals,
public buildings
- Save lives of children in schools
- Reduce fire hazard in homes
- Increase public knowledge
of fire causes
- Discourage firebugs

NOW in 1941...

all these things have been done.
Countless lives have been saved.
Property is safer from fire...and
further progress lies ahead.



On its 75th anniversary
The National Board of Fire Underwriters
rededicates its services to the public

THE NATIONAL BOARD OF FIRE UNDERWRITERS, 85 JOHN STREET, NEW YORK • ESTABLISHED 1866

Why crack eggs with a Steam Hammer...?



CRACKING eggs with a steam hammer is a dramatic way of demonstrating precision control of ponderous machinery.

With only the touch of the operator's foot to regulate its fall, the ton-mass of metal cracks the shell with all the finesse of a fastidious break-faster nicking the tip off his three-minute boiled.

But Delta engineers believe there's a proper machine for every job. They have spent fourteen years in careful designing and patient research, checked by countless shop experiments, creating a new type of machine tool. Stripped of

all "steam hammer" bulk, these Delta-Milwaukee machines out-perform old-type ponderous machines *costing three to four times as much*. Since 1927, Delta engineers have originated practically every major improvement in this specialized field of machine design. By countless thousands, these handy, flexible, portable Deltas have won their place—in tiny one-man shops as well as in mammoth mills and factories of our defense front.

If you're still "cracking eggs with a steam hammer," let us tell you how Delta-Milwaukee machines can serve your needs.

The Delta Manufacturing Company, 909 E. Vienna Ave., Milwaukee, Wis.

DELTA MILWAUKEE

World's largest exclusive manufacturers of low-cost, high quality
drill presses • grinders • abrasive finishing machines • cut-off machines
• circular saws • band saws • scroll saws • lathes • jointers • shapers

Textile Peace?

Gray-goods men see possible compromises as result of OPACS meeting to talk over price-fixing order.

Cotton-textile men, at the invitation of Leon Henderson, head of the Office of Price Administration and Civilian Supply, this week went to Washington in the hope of getting their markets running again. And when they all sat down around the conference table on Tuesday it was with little hope that all the problems arising from Henderson's order fixing prices on gray goods could be ironed out right off the bat.

In all truth, there had been more talk of taking the price-fixing order into court than there had been about cooperation until the OPACS chief indicated that he was willing to listen to advice from the trade. In the conciliatory gesture of calling a meeting, textile men saw the possibility of some compromises that could lead to a peaceful settlement.

• **Why Market Is Tight**—The trade's biggest concern was over the retroactive character of the price-fixing order. It appears that contracts not yet completed by delivery must be executed at the fixed prices or not at all. Inasmuch as the textile trade books orders months ahead, this affects a vast volume of business. Merchants argue that if the government can fix a 39¢-a-lb. price on a certain type of goods today, it can set 35¢ tomorrow and some other figure the day after, and each order can be made retroactive to cover all contracts on the books.

Net effect is that merchants have almost entirely stopped booking business for future delivery. That, in turn, means virtually complete paralysis of the cotton-textile markets, because hardly anyone has any goods on hand to be sold for immediate delivery. The result is a much tighter situation even than that which existed prior to the price-fixing order.

• **Other Problems**—Pending clarification of what is to be done on deliveries contracted for prior to the price order, the trade has a variety of other problems. It is asking Henderson to consult with experts from within the business on a long list of differentials not settled in the listing of ceiling prices. It also wants some further consideration given to the 1¢-a-lb. rise in cotton prices in the last few weeks. And it points to the fact that the wage minimum went up from 32½¢ an hour to 37½¢ after the price order was issued (BW—Jun. 21 '41, p. 58).

Finally, if the consumer is to be protected against excessive markups, the trade is emphatic in declaring that there will have to be price fixing all the way

down the line rather than simply on gray goods. To assure successful solution of all these problems, textile men are convinced that Henderson should appoint a representative committee from within the trade which he can consult on a continuing basis.

Renew Coal War

Bloodshed marking effort of Pennsylvania bootleg miners to halt stripping highlights problem's latest complications.

Pennsylvania's bootleg anthracite miners made headlines again last week, and once more bloodshed and powder smoke resulted from their attempts to stop coal-stripping operations in Schuylkill County (BW-Jan. 11 '41, p17). This time, 2,000 of the bootleg miners—who have been conducting mining operations on property not their own—set fire to an air compressor and wrecked steam shovels, and companies conducting the stripping operations called for state troopers to guard their property. One clash between miners and private detectives near Pottsville, Pa., ended with 13 miners shot and 20 others hurt.

• **Stripping Decried**—Basis of the dispute is the years-old opposition of the bootleggers to stripping. That operation, they say, rips up bootleg holes, destroys coal veins, and discourages future deep-mining operations, thus reducing the possibility of future legitimate jobs. Answer of the operators is that stripping will end bootlegging, and that that's the real reason for the opposition. Besides, the owners point out that the bootleggers are taking coal that does not belong to them.

Meanwhile, the whole situation has been further complicated by the threat of the bootleg miners to swamp Pennsylvania's relief rolls if two bills recently passed by the legislature and designed to put all trucks engaged in "illegal practices" out of business are applied to them. Under the bills, the public utility commission is empowered to clamp down on truck operators hauling bootleg coal, an activity that has been termed "illegal" many times by state officials.

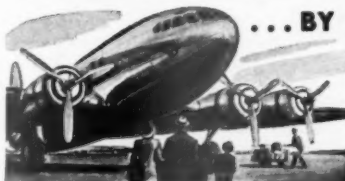
• **Appeal to Consumer**—Furthermore, speakers at bootleggers' mass meetings declared that the public can scarcely afford to do without the 4,000,000 tons of coal mined annually by them and sold in Philadelphia, New York, and Baltimore.

In addition, they argued that many bootleg operations in the section are being legalized through payment of fees to coal landowners for each ton mined and that if the independent industry was left alone for another year, it would become entirely legalized.

Gone are the days of
**"SLEEVE-GARTER
METHODS"**
in selling
Latin America



**MODERN BUSINESS MOVES MEN, MAIL, MERCHANDISE
...BY FLYING CLIPPER!**



"Mañana" won't do today in selling south of the border. Get there first with men, mail and merchandise if you want the order.

Progressive executives now move men by Clipper, cover twice the ground in half the time and at an actual *saving* in salary expense. Their samples speed to prospects by Air Express, beat competition by days and weeks. Letters, contracts, specifications, credit information and documents are air mailed as a matter of course.

Why not combine business and pleasure in a Clipperswing around exotic Latin lands? By Clipper you can make the entire trip in a fraction of the time you may think. Consult your Travel Agent, any airline office or—if neither is available in your city—write Pan American Airways, Chrysler Bldg., New York City.

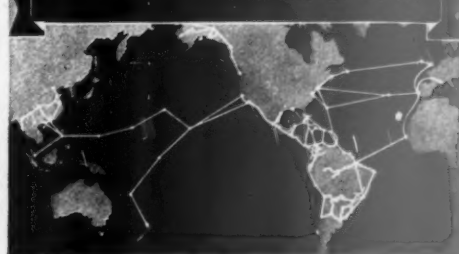
IT'S QUICKER BY CLIPPER... MORE CONVENIENT, TOO!

A few examples of fast, frequent air service to 163 Latin-American cities and other world markets

	Time in Transit	Air Mileage	Flights per Week
New York to Rio	3 days	5,646	4
Los Angeles to Lima	2 days	5,117	3
Chicago to Havana	1 day	1,332	17
Seattle to Juneau	5½ hours	910	4

Transit times and air mileage include connecting flight by domestic airline to Pan American gateway city.

AMERICA'S MERCHANT MARINE OF THE AIR



PAN AMERICAN AIRWAYS SYSTEM

MARKETING

Latin Serenade

U. S. radio giants, all set to go to town on hemisphere shortwave, are now wooing sponsors for programs.

With the President's signature of the second deficiency appropriation bill last week, the Committee for Coordination of Cultural and Commercial Relations between the American Republics got \$7,000,000 to spend in the new fiscal year. Out of that tidy sum, shortwave radio—a key voice in the "good neighbor" choir—will undoubtedly get one \$200,000 piece (for programs via non-commercial WRUL in Boston) and maybe another \$325,000, as yet not earmarked. Comparatively, however, this government outlay for romancing the republics south of the border by means of radio is chicken-feed. The big serenade isn't going to be charged up against the public treasury.

• **Passing the Bill Along**—It's coming out of the coffers of the National Broadcasting Co., the Columbia Broadcasting System, General Electric Co., Westinghouse Electric & Manufacturing Co., and the Crosley Corp. And these giants, in turn, hope they can eventually pass a good part of the bill along to the U. S. advertiser.

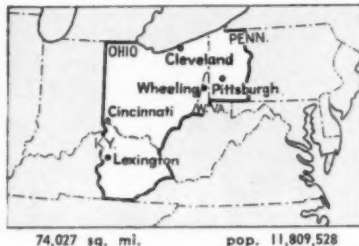
Of the potent radio quintet mentioned above, all own shortwave stations with 50,000 or more watts capable of reaching every nook and cranny in the Latin American market. In allowing such facilities to NBC, CBS, et al., the Federal Communications Commission wanted to counteract the deluge of shortwave propaganda emanating from Europe. Once (in 1938) the government was going to achieve this end by building its own shortwavers. But the prospects of Uncle Sam's sticking his foot into radio's parlor created such an uproar that private enterprise got the assignment and, since about two years ago, can sell time to advertisers.

• **Lining Up Sponsors**—To date, the sponsor list has not been large, but neither did anyone expect it to be. It has taken time to build transmitters, work out operating policies and programs. Even now the Columbia Broadcasting System's shortwavers aren't on the air, and Westinghouse's WBOS is still polishing its facilities. General Electric's WGEO meantime has five advertisers, but—feeling that they are helping in an experiment—G.E. is charging them only for talent. Time costs are winked at.

The really big push is expected to

The Regional Market Outlook

CLEVELAND (Income Index—129.1; Month Ago—127.9; Year Ago—108.6)—Armament expansion continues as the dominant influence here. Carnegie Illinois' \$85,000,000 enlargement program at Homestead and Duquesne, Pa., and other announced additions to steel capacity will create 5,000 jobs. Thompson Products will more than double its new plant here; \$20,000,000 is to be spent for more TNT capacity at Sandusky, O. Material shortages are a growing prob-



RICHMOND (Income Index—138.9; Month Ago—136.4; Year Ago—115.9)—This Reserve district, at the top of the income heap, may well continue to outpace the national average.

The basic expansionary force is defense. Recent projects include \$18,500,000 to enlarge the Morgantown (W. Va.) ordnance works; \$6,000,000 for a quartermaster depot at Richmond, and \$23,000,000 for a cantonment at Blackstone, Va. The Hampton Roads area, with its huge shipyards, is an outstanding example of what's happening (BW—Mar. 15 '41, p. 72). Its population in 1940 was 361,000. Today, it is 485,000, up 34%; with five years more of intense shipbuilding it might reach 700,000.

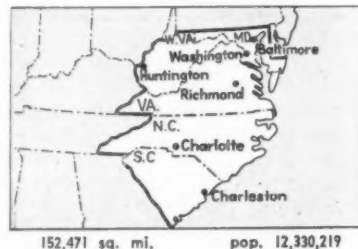
In the Carolinas, rains have dispelled the threat of drought-ridden crops and a shortage of hydroelectricity for industrial operations (BW—Jun. 14 '41, p. 56); retail sales leaders are such defense centers as Wilmington, N. C., and Charles-

ton, S. C. (shipyards); Fayetteville, N. C., Columbia and Spartanburg, S. C. (cantonments). Cotton-textile operations in the Piedmont section are running 50% above 1940. Payroll gains are being compounded, too—by overtime pay and by the recent 5¢-per-hour boost in textile minimum wages. Cotton and tobacco crop prospects are off slightly from last year, but 85%-of-parity loan prices will lift farm income at least \$40,000,000 above that for 1940.

The rise in industrial payrolls is stimulating retail trade; department store purchasing commitments are far ahead of last year, thus boosting operations in apparel, shoes, textiles, and ceramics in this as well as other Reserve districts. To date, sales in cities like Canton, Dayton, and Erie are up 30% from 1940, whereas business in Oil City, Pa., and Lexington, Ky., is little changed from last year. Industrial centers generally are outstanding, while rural trade is laggard.

Farmers still find harvest labor scarce. Crop conditions, however, have been greatly benefited by recent rains.

ton, S. C. (shipyards); Fayetteville, N. C., Columbia and Spartanburg, S. C. (cantonments). Cotton-textile operations in the Piedmont section are running 50% above 1940. Payroll gains are being compounded, too—by overtime pay and by the recent 5¢-per-hour boost in textile minimum wages. Cotton and tobacco crop prospects are off slightly from last year, but 85%-of-parity loan prices will lift farm income at least \$40,000,000 above that for 1940.



TWIN CITIES (Income Index—124.5; Month Ago—123.3; Year Ago—118.2)—The weather, as usual at this time of the year, holds the key to income in this agricultural region. Thus far, the growing season has been favorable. Wheat prospects are now 10% better than a year ago, pastures are much improved, feed crops are apt to be ample.

Price levels, of course, are assured by government support through Commodity Credit Corp. loans and lease-lend buying.



Hog, butter, and egg quotations have advanced contraseasonally in recent weeks and marketings have held up better than usual. Cream receipts are running 20% above 1940.

After lagging in the earlier months of the year, rural retail areas have now begun to outstrip urban centers in sales gains over 1940. And trade should expand further as wheat and other spring grains are harvested.

The industrial pace is quickening, but not so feverishly as in armament districts, such as Cleveland. Copper output, both in Montana and northern Michigan, may be boosted by subsidies to high-cost mines. Iron ore shipments continue at capacity, and plans for defense plants around the Twin Cities are multiplying.

Longer-term district prospects remain below average because of limited volume of government awards so far. But during the current farm upsurge, retail trade should keep pace with the nation's.

A NICKEL ON T LIGHTING...

8" to these Four Questions!

3 Am I getting a sufficiently wide choice of fixtures so that I can select exactly the ones I need?



"Am I sure that I've looked over *enough* fixtures to be able to choose the ones that are best for *me*? Am I getting fixtures on the basis of the amount of light I should have, individualized to my requirements, rather than on price alone? How can I be sure?"

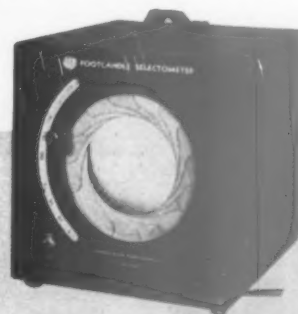
Ask General Electric! G. E. not make fixtures for MAZDA F lamps, but cooperates with leading fixture manufacturers to assure fluorescent lighting geared to your requirements. As a result, there are more 100 different types of tested-certified-guaranteed fixtures available for your needs. Your G-E MAZDA lamp distributor has many of them. Before you spend one nickel on fluorescent lighting, be sure to see the complete line he now offers you!

4 Am I getting the right lamps —lamps that are made to give maximum light for the current they use?



"Will the fluorescent lamps I buy give maximum light throughout life at low cost? Do they use a phosphor (the coating on the inside of the lamp) scientifically made to the proper fineness to produce best performance throughout life? Can I get the same high quality throughout which has made G-E MAZDA incandescent lamps a standard of

performance?" *You can* if you specify G-E MAZDA F lamps . . . lamps that must pass hundreds of tests set up by MAZDA research and double-checked by Electrical Testing Laboratories. As a result of General Electric's continuous program of research that started with Edison (who himself patented a fluorescent device), today's G-E MAZDA F lamps give up to 40% more light. Yet they cost as much as 45% less than they did when G.E. produced the first practical fluorescent lamp.



★ **NEW G-E INVENTION HELPS YOU CHOOSE AMOUNT OF LIGHT YOU WANT** for easier seeing in your store, factory, office, or other business place. Your G-E lighting man will show you how to operate this new device . . . the G-E Footcandle Selectometer. Its

control allows you to vary the amount of light on the job you are studying, smoothly, easily. You can select the amount of light you like best—whether it's for selling, manufacturing, or office work. Ask for a G-E Footcandle Selectometer demonstration today!



... the NEW
**AMERICAN
REDUCTION
DRIVE**
is your answer



Compact! Economical! A speed-reduction unit that mounts on the shaft extension of the driven machine by means of a keyed bushing. It's round, like a pulley—no larger, and not much heavier. Speed ratio is amplified through a standard short-center belt drive connecting with a motor of any make, any style, or any age.

Five standard sizes: $\frac{1}{2}$ to 25 H.P. You'll quickly see it's the answer to slow-speed drive problems!

- * Designed for immediate delivery from dealers' stocks
- * Quick, easy installation
- * No special foundation
- * Saves space
- * No maintenance problems
- * Quick, easy speed changes
- * Low cost
- * Easy to relocate

For catalog, write to
**THE AMERICAN
PULLEY COMPANY**
4280 WISSAHICKON AVENUE
PHILADELPHIA, PA.

come this fall. Westinghouse and CBS at that time will stick their oars into the pond, which means that two more high-gear sales forces will be spreading the gospel of Latin America. CBS will also put some diversified tones into the picture by insisting that an advertiser, instead of buying time on a single shortwaver located in the U.S., must buy a whole Latin American hookup fed via shortwave from New York.

• **For Varied Pocketbooks**—With CBS obviously prepared to boost advertising expenditures into a higher realm, there will be facilities priced to suit just about every kind of sponsor pocketbook.

NBC, veteran of the business, offers three types of services: (1) use of a single shortwaver (either WRCA or WNBI) at \$300 per hour; (2) a network fed from New York via shortwave; and (3) shortwave plus transcriptions on local Latin American stations. NBC advertisers currently include the American Export Airlines, R. J. Reynolds Tobacco Co., Standard Oil of New Jersey, RKO Radio Pictures, Kolynos, and Adam Hats. Most of this group has elected to use a single station setup, but Standard Oil (sponsoring Raymond Gram Swing's comment in Spanish and Portuguese) utilizes a network.

• **Crosley's List**—Crosley (WLWO, Cincinnati) has five sponsors: Old-Fashioned Revival Hour (religious group), Bristol-Myers Co., J. B. Williams, American Safety Razor, and Moore-McCormack Steamship Lines. Crosley, like NBC, also has three types of services: (1) single station; (2) network; and (3) a spot announcement service—a department in which Crosley is unique. Carter's Little Liver Pills, Electric Auto-Lite, and Reader's Digest are buyers in the latter category.

General Electric's non-paying sponsors include Tidewater Associated Oil, Conde Nast Publishing Co. (Vogue), Gillette Razor Blade Co., Royal Baking Powder, and American Express Co.

• **No Liquor Advertisers**—Significantly, this group of pioneer advertisers is of such caliber that no U.S. station would deny them facilities. The list is not top-heavy with drug accounts, and there isn't a single liquor advertiser. Yet laxatives and liquor are among the staunchest newspaper advertising standbys in Latin-America, and hence the question—will they get access to radio?

There may be no women's clubs below the equator to raise a storm of protest, but nevertheless the answer thus far is a decided no. NBC and Westinghouse rigidly will maintain U.S. broadcasting standards. CBS, which now has signed up some 60 stations for its network and expects to have 100 when operations begin on Sept. 1, has announced no policies whatsoever. But no radically different rules are expected here, either.

• **Eyes on Washington**—Since shortwave licenses are issued in Washington,

and commercial relations rely to some extent on the State Department, explanatory behavior (in the U.S. sense) is considered a wise course. Liquor, laxatives, etc., may have an inning when the Latin American tastes are more intimately probed. But for the nonce they will probably go begging, though some of shortwave's most eager prospects are in these classifications.

As for the problems of language (Spanish, Portuguese, or English), rates, and market data, these are more or less deemed matters to be settled by experience. Programs thus far lean heavily toward music and news. A recent checkup shows that 51% are broadcast in Spanish, 15% in Portuguese, and 34% in English (though this category includes musical programs with Spanish or Portuguese explanatory announcements).

• **No. 1 Prospects**—It now remains only for some advertiser to make a really big push—someone willing to put up a sizable expenditure in reaching the 4,000,000 sets below the border—to get the ball rolling. Speculation has it that this dramatizing influence will come either from Ford (who once sent a chain program to Mexico) or from Coca-Cola. Neither has yet announced final plans, if any, but plenty of attention is being lavished on them.

When such a break does come, it may not only favorably seal the fate of commercial shortwave broadcasting, but will also largely kill off the older form of Latin American broadcasting. The prior system involved buying all facilities from local stations scattered over thousands of miles of space. Haggling over prices, rates of exchange, and all the other nuisances of long-distance transactions made this system hectic at best.

• **What It Means**—The future of Latin American radio thus patently hinges on the fact that it's not located in Latin America but in New York, Boston, Cincinnati, Schenectady. That, plus the fact that the government—as in so many other instances—is virtually playing the role of publicity agent at a time when European markets are dead and buried.

OUT OF THE GRAVE

There's hardly a town of any size in the U.S. that doesn't have, somewhere on its outskirts, a tangible reminder of the real estate boom of the 1920's in the form of a group of vacant lots, originally laid out as a promising subdivision, complete with paved streets, sewers and other utilities, and a large sign announcing that "a new development will open here shortly." Now the Twentieth Century Fund in its survey on defense housing suggests that communities faced with the problem of providing housing for defense workers can save time and money by taking advantage of these ghostly subdivisions.

How Are Sales?

New marketing service in drug field, now operating in 24 major cities, looms as potential competitor to Nielsen.

A manufacturer sees his product out of the shipping room and into the hands of distributors. Then he sits back and begins worrying about re-orders. Since there may be a lag of months between factory orders and consumer sales, he may not get the final answers to such vital questions as the effectiveness of his advertising, the amount of dealer support his product is getting, or the local strength of his competitors until it's too late to do anything about them. Second-hand reports from salesmen and distributors sometimes prove more confusing than helpful.

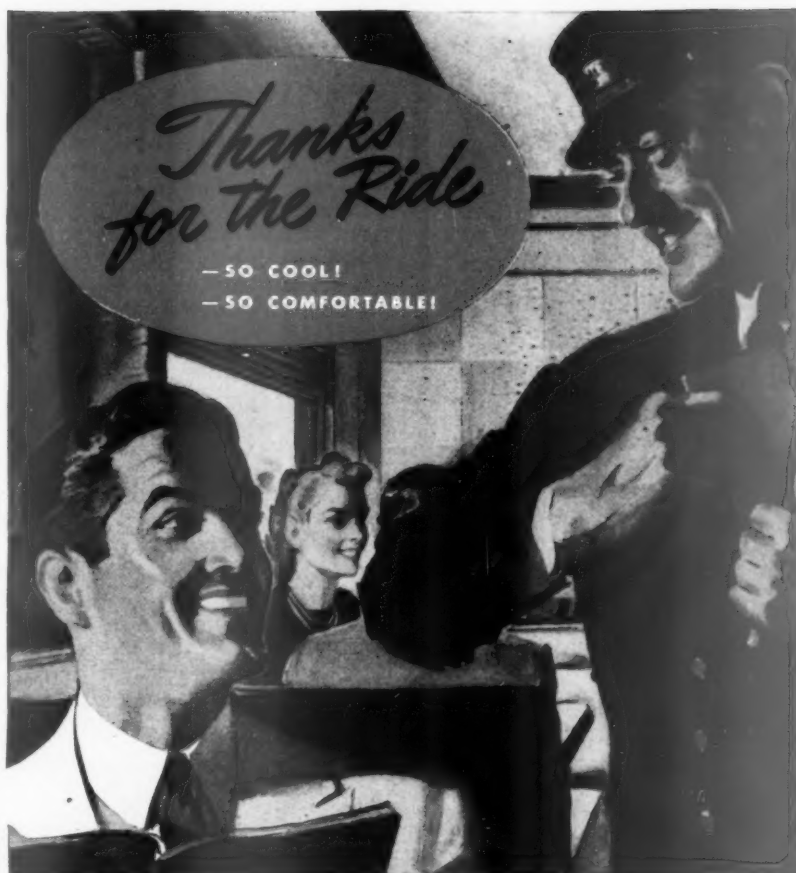
• **Checking Up**—The best solution to this problem, of course, is an actual check made on sales, inventories, display, promotion, and so on in specific retail outlets. Since 1933, the A. C. Nielsen Co. of Chicago has been the foremost exponent of this method of keeping the manufacturer abreast of his market.

Nielsen's food, drug, and liquor indexes, expanded from audits of sample stores (Nielsen's present sample is equal to about 3% of the stores in a field) have brought in an imposing list of manufacturer clients who pay the company a pretty penny for a detailed check on their products' competitive standing. (General Foods reportedly gives Nielsen better than \$200,000 a year to report on its brands.) Because of the technical training and heavy expense involved in setting up and maintaining a store audit, Nielsen's has had the field almost entirely to itself.

• **Potential Competitor**—This week, however, a potential Nielsen competitor, Audit Bureau of Sales, Inc., came out from under wraps. After starting out cautiously over a year ago, conducting audits of drug products in selected stores in Atlanta, Indianapolis, Providence, and Rochester, A.B.S. has established permanent headquarters in Greenwich, Conn., and is branching out in a large way.

A.B.S. is now operating in around 800 drugstores in 24 major cities across the country, with plans for expanding to 13 more cities—including New York, Chicago, Philadelphia, and Boston—within the year.

David A. Christianson, the marketing specialist who tried to launch Point of Sale, Inc.—the scheme for selling store window display space to manufacturers—a few years back (BW—Jul. 17 '37, p. 22), is president and idea man of A.B.S. Joseph W. Eaton left his job as research di-



Yes, this great ALL-WEATHER FLEET offers more than Certainty!

Of course, the great rank and file of business men and women take the Pennsylvania's All-Weather Fleet—first, last and always—because of its 365-day dependability.

But what a blessing it is when summer really "turns on the heat"! You relax in modern air-conditioned Pullman Lounges possessing every up-to-the-minute appointment—divans, murals, mirrors, radio, beverage bars. You dine in an invigorating atmosphere that gives

zest to your appetite. You sleep on a real bed in a private room at a temperature which you determine yourself. If you have work to do, fine! Do it in coolness and quiet.

Six types of private rooms to choose from—Roomettes, Duplex Rooms, Bedrooms, Compartments, Drawing Rooms, Master Rooms. Also Section Sleepers. And almost all trains of the fleet carry modern reclining-seat coaches. The cost is small—because fares are SO LOW!



Get a good night's sleep! No tossing, perspiring because of the heat. You regulate your own temperature in your private room. Hotel-like in its completeness, even to individual toilet facilities. The cost? Surprisingly low!

Leaders of the Fleet!

BROADWAY LIMITED (16-hour All-Room Train)

New York • Philadelphia • Chicago

THE GENERAL

New York • Philadelphia • Chicago

"SPIRIT OF ST. LOUIS"

New York • Philadelphia • St. Louis
Washington • Baltimore • St. Louis

LIBERTY LIMITED

Washington • Baltimore • Chicago

THE PITTSBURGHER

(All-Room Train)

New York • Pittsburgh

THE GOLDEN TRIANGLE

Pittsburgh • Chicago

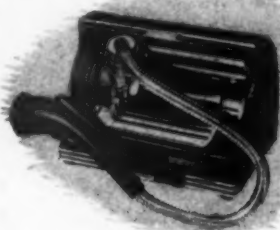
And daily trains serving
Pittsburgh, Columbus,
Cincinnati, Cleveland,
Detroit and other cities.

SHORTEST EAST WEST ROUTE

PENNSYLVANIA RAILROAD

THIS

Secretary



Works anytime . .
at home
or office
without overtime

EDISON
VOICEWRITER
Ediphone

Write Dept. B7, Ediphone Div., Thos. A. Edison, Inc., West Orange, N. J. (or) Thos. A. Edison of Canada, Ltd., 610 Bay St. Toronto

PLASTICS



**As Molded by G.E. for
FLUORESCENT LIGHTING**

The obvious complement for fluorescent lighting fixtures is plastics. For plastics—light weight, attractive, easy to clean, economical, versatile for design, easy to assemble, and possessing high lighting efficiency are, naturally, commanding the attention of the entire industry.

For their Fluorogril fixture, shown above, the John C. Virden Company incorporates both translucent molded and laminated plastics produced by General Electric. Like manufacturers of hundreds of different products, they have found G.E.'s complete plastics manufacturing and engineering services of vital importance. For similar service, consult your nearest G-E plastics representative or write Section M-75, G-E Plastics Department, Pittsfield, Massachusetts.

FD-187

PLASTICS DEPARTMENT
GENERAL ELECTRIC

rector of Vick Chemical Co. to become the company's chief analyst.

• **By Individual Cities**—Unlike Nielsen, which releases figures on a national and regional basis (with the exception of ten test cities, used for checking the effectiveness of local advertising campaigns, premiums, and promotions), A.B.S. operates and sells its service, by individual cities. A.B.S. officials say that, when their service is fully expanded, their audits will cover 50% of the U. S. market for drugstore products, via a 10% store sample, though the new outfit will not follow Nielsen's policy of developing a country-wide figure. A.B.S. plans to enter the food field as soon as expansion in drugs is completed, but will not go after liquor business (probably because there are not enough potential accounts to warrant the expense of setting up, and maintaining, a roster of retailers).

Audit Bureau of Sales lists 26 clients, including some of the biggest names in the drug field (for example, E. R. Squibb & Sons, Vick Chemical Co., Lydia E. Pinkham, Wildroot, and Zonite Products Corp.). When expansion is complete, the A.B.S. report on a single item in all 37 cities will cost \$750 a month.

Manufacturers can get spot checks at the rate of \$10 per 20 stores—about the size of the sample in most cities. If a manufacturer has two products in the same line—for example, milk of magnesia and mineral oil—A.B.S. charges for only one product.

• **Figures—Minus Frills**—A.B.S. cuts costs and expects to build up a volume business by reporting only the basic figures on stocks on hand, dealer purchases and margins, selling price, premiums and deals, and total consumer sales of the client's product and all competitive brands. Believing that most manufacturers want only the cold figures, A.B.S. will not furnish the elaborate analyses which always have been an important part of Nielsen's service.

Nielsen works on a contract basis, and some contracts are exclusive, binding the agency not to make its service available to a manufacturer's competitor. A.B.S. will have no exclusive commitments, require no contracts, and sell its service on a monthly basis. Nor will A.B.S. follow Nielsen by furnishing data by store and city size. Although chain outlets are included in the A.B.S. store sample, the bureau will not give a break-



FLASHCASTING THE NEWS

For the last week, Philadelphians have been "looking right over the shoulder of the Evening Bulletin's news editor." At least that's what the Bulletin called it when it started putting "flashcasts" on its new electric sign (above) which carries bulletins direct from the newsroom to the street in a matter of some 15 seconds. Other such signs frequently require as many minutes or longer. Developed by the Trans-

Lux Ad-News Corp. (1270 6th Ave., New York City), the installation is the first of its kind in the country. Speed of transmission is secured by typing the news message directly on tape. This perforated tape then passes to an electrical "brain" in which tiny metal fingers are so arranged as to make electric contacts through the perforations. These impulses are thrown on a revolving drum which assures movement of the message across the board's 840 electric lights.

down, like Nielsen, by chains and independents.

• **Advice, But No Fee**—Nielsen always has paid retailers a cash fee in return for permission to audit their accounts, plus giving a certain amount of "marketing advice." A.B.S. will pay nothing, but the bureau's researchers—all full-fledged auditors—will furnish stores with auditors' reports and advice on tax problems.

Until A.B.S. is established on a country-wide basis it will not be fully competitive with Nielsen—if then. Currently, several companies are subscribing to both services, feeling that Nielsen furnishes a long-term country-wide picture, while A.B.S. gives a spot check on key markets with more up-to-date data than the Nielsen reports provide.

Advertising Cut

But media salesmen now see Simmons move to halt its dealer allowances as exception to usual competitive situation.

Last week advertising circles were gloomily discussing the Simmons Company's move to stop sharing with dealers, on a 50-50 basis, newspaper advertising devoted to Simmons products, especially the Beautyrest mattress line.

• **Sounded Like Warning**—To all advertising agency and media men, the Simmons announcement was bad news. It highlighted fears of a curtailment of consumer goods advertising as defense requirements eat into the available supplies of raw materials. To radio and newspaper men, intent on maintaining the volume of billings on local accounts, the announcement had a particularly ominous note, for it suggested where the ax of budget curtailment might fall first—on cooperative dealer programs.

Time was when they might not have been so distressed, for only a small portion of the funds set aside by many manufacturers as advertising allowances found their way into radio station or newspaper cash drawers anyhow; the balance went to support price-cutting. Nowadays, thanks to a general tightening up in the administration of such funds, particularly on well-policed, price-protected lines like Simmons', cooperative campaigns account for a lot of extra revenue, although publishers and station owners might wish that the campaign were placed at the higher national rate.

• **Second Thoughts**—While the first news of Simmons' action brought dismay to the space and time salesmen, they felt better about the situation on a sober reappraisal this week. In the first place, it was evident that the announcement had not touched off any wave of cancellations. In the second, they discovered they had some potent argu-

75,000 ADDITIONAL SALESMEN



A SINGLE Lever Bros. display is an effective silent salesman! Then multiply by 75,000 and calculate the punch this H & D "Selmor" merchandise display added to the launching of SWAN SOAP!

For more than 50 years Hinde & Dauch has been "in" on many varied marketing plans involving all phases of corrugated engineering. The development of colored shipping boxes was pioneered in the H & D Package Laboratory. Here, experiments perfected the H & D patented Duplex—the popular combination shipping-display box. Here, too, were initiated construction methods for economical mass production of H & D "Selmor" corrugated display stands.

A cross-section of the output of H & D's 26 strategically located mills and factories is contained in the portfolio, "Close-ups of Successful Corrugated Packages." A quick glance through these 16 stimulating case studies will give you practical, profitable packaging ideas. For your copy just fill in and mail the coupon below. There's no obligation.

HINDE & DAUCH *Authority on Packaging*

4161 DECATUR ST., SANDUSKY, OHIO

I'd like a copy of your portfolio, "Close-ups of Successful Corrugated Packages."

NAME _____ POS. _____

FIRM _____

ADDRESS _____

CITY _____ STATE _____



Mail coupon for this free portfolio. It illustrates the "How and Why" of 16 highly successful corrugated packages.

You regulate
the temperature
yourself
in the
**AIR-CONDITIONED
ROOMS**
OF THE
WALDORF-ASTORIA

Single from \$7...For two, from \$10.
Meeting-rooms, restaurants, bar are
also air-conditioned.

No extra charge for air-conditioning.
Park Ave., 49th to 50th St., New York



**THIS is what
Industry needs!**

- Proximity to world's greatest markets
- No personal sales or corporate income tax
- Skilled and unskilled labor
- Friendly intelligent government
- Lowest city tax rate in N. J.
- Good living conditions

Write for all the facts today

City of Linden - New Jersey

Myles J. McManus, Mayor

Linden

NEW JERSEY

WHERE IT'S PROFITABLE TO PRODUCE

ments which they could advance to protect such cooperative accounts.

When Simmons announced that the dealer budget would be terminated July 1, it explained that rising costs were shaving profit margins; that the \$39.50 Beautyrest price was too satisfactory to try to boost; that orders were out-running deliveries; and that "the withdrawal of our Cooperative Newspaper Advertising Plan is the least injurious move we could make."

How much Simmons can thus save itself is not accurately known, though estimates run up to almost \$500,000 (Simmons in 1940 spent \$970,000 for advertising, of which \$482,000 went into magazines). And while a half-million dollars may not be any startling economy for a company whose net sales range between forty and fifty millions, it means that much less drain on the cash register for purposes considered non-essential in boom times—and that, of course, applies in like measure to Simmons' dealers and their cash registers.

• **A Competitive Argument**—Manufacturers in other consumer industries, facing the same problems as Simmons but usually beset by more competition, may not be able to make such easy solutions—and that's the big argument on which radio and newspaper salesmen will lay special emphasis. Cutting dealer advertising allowances might be the opening for a competitor to grab dealer goodwill. Also, dealer advertising, which is placed mainly in newspapers and on "spot" radio, is a very flexible way of handling a campaign. And since these strenuous times demand constant shifts in marketing strategy, flexibility is a decided asset. To buttress their case, the media salesmen can point to the fact that electrical appliance manufacturers are maintaining dealer advertising appropriations, and may even increase them. A similar situation prevails in the automotive industry.

Mail-House "Out"

Sears and Ward insert escape clauses in catalogs to guard against the uncertainties of price and supply.

However uncertain the outlook may be, each of the big mail-order houses must commit itself twice a year, to 7,000,000 catalog customers, on some 150,000 items of merchandise at prices low enough to make sales for six months and high enough to avoid calamitous loss from market fluctuations. This week, on almost precisely the same dates as in 1940, customers of Sears, Roebuck & Co. and Montgomery Ward & Co. began receiving their books by mail.

Both firms show prices averaging 6%

to 7% above last year. Ward brags it offers 30% of its items at prices no higher than a year ago—which means 70% of them have been boosted. Only reason why prices are no higher is that the mail order industry has to place its orders many months in advance.

• **To Raise or Refuse**—To protect themselves against future uncertainties of price and supply, both big houses employ escape clauses reserving the right to raise prices or refuse orders. These cuts are tipped into the front of the catalogs, indicating last-minute precautions. This is a recurrence of practices of the World War years. Then, Sears used a general clause of similar sort, while Ward placed spot notices to the same effect on pages offering the more volatile-priced items. Ward employs spot notices again in 1941 on several dozen articles, particularly those using zinc, aluminum, and other elusive materials.

Ward's special insert states:

In pricing and printing this catalog, Ward's have been required to anticipate such problems as these: difficulty of securing certain lines of merchandise due to defense goods; possible new taxes on some articles that would raise their prices; contemplated laws affecting time purchases, and other situations.

In spite of this, it will be the company's purpose to fill your orders completely, promptly, and at the prices quoted in the catalog. However, if circumstances prevent this, it may be necessary on some items to refuse or delay your order, substitute materials, or ask for a higher price.

Sears says:

... Our prices are so low that should there be any increase in our costs by reason of any federal, state or local government regulations of taxes, we reserve the right to add any increases, from the time they occur, to the prices shown in this book.

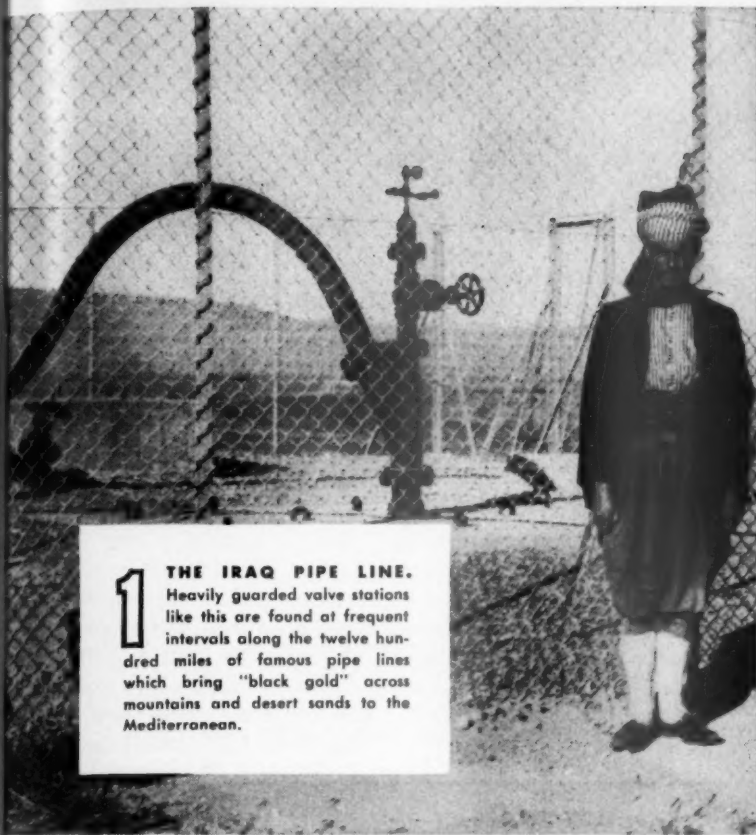
You are protected, of course, on all your purchases by our guarantee of SATISFACTION OR YOUR MONEY BACK.

Should any price advance be small, we will explain it to you as we bill your order. Should it be large, we will advise you by letter before shipping and you can make additional remittance . . . or instruct us by letter. . . .

• **On Watch for Retailers**—Both firms have adopted the policy that they may refuse large orders or those of dealers. They were taught this lesson 25 years ago by shrewd bush-league retailers, who recognized that the prices set months earlier when the catalogs went to press were lower than their regular wholesale suppliers were able to quote in a period of rising markets, and acted accordingly.

Pressure for efficient use of railroad freight cars forced a shift in handling catalogs. These are conventionally loaded into boxcars as they come from the bindery, and held on rail sidings until release date, immobilizing about 100 cars per company. Sears paid its printers an overtime-extra to work their binderies through the summer week ends. Thus it saved 200 car days, bring-

FAMOUS LIFE LINES



1 THE IRAQ PIPE LINE.
Heavily guarded valve stations like this are found at frequent intervals along the twelve hundred miles of famous pipe lines which bring "black gold" across mountains and desert sands to the Mediterranean.



2 YOUR CAR'S BRAKE TUBES, life line of safe motoring, are made of Bundyweld Copper-coated Steel Tubing — standard throughout the automotive industry because of its great strength, ductility and resistance to vibration fatigue.

YOU DON'T SEE THEM — and you don't think about them — but all through the day, every day, your safety and comfort depend on "famous life lines" of one of the various types of Bundy tubing.

Whenever you drive, you rely on Bundy tubing at some twenty points in your car. Your electric refrigerator probably has a Bundyweld Condenser Coil and other Bundy tubing parts.

Your gas furnace, range or water heater, your air conditioning system, in fact, many different products which influence your daily activities, all

have one or many component parts of Bundy tubing.

If you are a manufacturer and use tubing in volume production, you will want to hear the Bundy story — how Bundy tubing is completely adaptable for a wide range of purposes; how it can be furnished either in commercial lengths or as complete, fabricated parts; how Bundy engineers can frequently take right off your hands the tubing part of your product design.

For complete particulars, write Bundy Tubing Company, Detroit, Michigan, and ask for a call from one of Bundy's Sales Engineers.

BUNDY TUBING



ENGINEERED TO YOUR EXPECTATIONS



BUNDYWELD double-walled steel tubing, hydrogen-braced, copper-coated inside and outside. From Capillary sizes up to and including $\frac{1}{4}$ " O. D. This double-walled type is also available in steel, tin-coated on the outside, and in Monel.



BUNDY ELECTRIC WELD steel tubing. Single-walled — butt welded — annealed. Also furnished tin-coated outside if desired. Available in sizes up to and including $\frac{1}{2}$ " O. D.



BUNDY "TRIPLE-PURPOSE" MONEL tubing. Double-walled, rolled from two strips, joints opposite, welded into a solid wall. Available in all Monel, Monel inside — steel outside, and Monel outside — steel inside. Sizes up to and including $\frac{1}{2}$ " O. D.

ing complimentary letters from Coordinator of Railroads Ralph Budd as well as from the Association of American Railroads.

• **Real-Name Customers**—Mail-order competitors last spring openly doubted Sears' wisdom in using nine catalog pages (costing perhaps \$6,500 per page) to present facts and photographs about two real-name customer families (BW—Jan.25'41,p33). Sears thinks it paid, this time takes 11 pages—and localizes the job by using four different pairs of customer families for catalogs mailed respectively to the East, the South, the Middle West, and the Pacific Coast.

New Vitamin Rules

FDA proposals increase minimum dietary requirements. Army purchases for soldiers in North cheer industry.

What with talk of extending the enrichment program from bread and flour to everything in sight, it looked as though vitamin concentrates were all set to grab the spotlight at the national nutrition conference a few weeks back. But scientific experts at the conference gave concentrates the cold shoulder and plugged for a proper diet of natural foods (BW—Jun.7'41,p18).

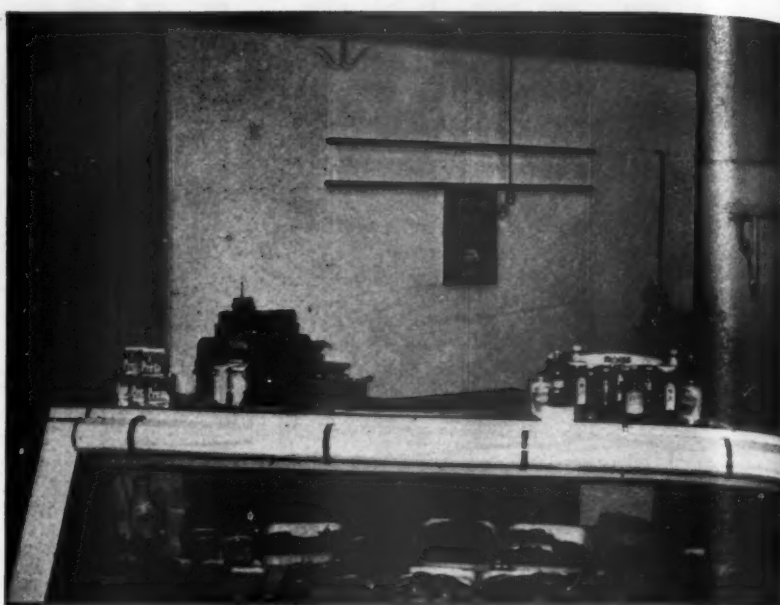
Consequently, when the Army announced last week that, in future, two vitamin tablets a day (containing A, B₁, B₂, C, D, and nicotinic acid) would be issued to soldiers stationed in such northern outposts as Iceland and Alaska, it was a welcome boost for vitamin concentrates. (Incidentally, trade comment was that if a private manufacturer put forward, in his labels or advertising, the same claims for the assorted vitamins' curative and disease-preventive powers found in the Army's official press release, he probably would have the Food and Drug Administration and the Federal Trade Commission on his neck in no time flat.)

• **New Labeling Rules**—Meantime, the Food and Drug Administration's regulations for the labeling of dietary products—including vitamin and mineral-enriched foods—are progressing apace. A list of tentative regulations was issued July 8. The food and drug industries will have a chance to register objections, but the final regulations, to become effective around the first of the year, undoubtedly will follow closely those already published.

Basically, the regulations call for the following information on the labels of vitamin and mineral products:

(1) A statement of the special properties which are the basis of the product's advertising and selling claims.

(2) If the product contains vitamins



LOCKER PLANTS

A prefabricated locker plant, for use in meat and grocery stores, is counted on to help the rural food store owner regain some of the sales volume he has lost to the large locker plants which have sprung up in rural areas for freezing and storing farmers' products. The prefabricated locker plant—built and installed by the Guest Engi-

neering Co., Chicago—can be fitted to any available space, may be erected in one week. Selling price of a 50-locker unit, with display case and sharp freezer is \$2,000. Selling point is that store owners can not only butcher and process meats and vegetables for their old customers who have been using the bigger locker plants, but they can also sell some of their own meats and vegetables to be stored too.

A, B₁, B₂, C, or D, or the minerals calcium, phosphorus, iron, or iodine, a statement of the proportion of the minimum daily requirement of those vitamins and minerals that can be obtained from a given amount of the product. The regulations list the minimum daily requirements of these vitamins and minerals for various age groups.

(3) If the product contains other vitamins and minerals, the need for which has been established by competent scientific opinion, a statement telling exactly how much of those vitamins and minerals is present in a given quantity of the product. Moreover, if the product contains vitamins and minerals whose importance in the human diet has not been established, the label must explain this.

• **Standard Revised**—The chief difference between the present regulations and those originally issued by the FDA in the spring of 1940 (BW—Apr.6'40, p40), is a sharp increase in the minimum dietary requirements for the various vitamins and minerals. FDA may try to apply the new regulations not only to fortified foods but to natural ones as well—milk and cheese, for example—if producers push vitamin claims too hard. A court fight would follow sure.

• **Dairy Men Busy**—At the time the new regulations were published, FDA opened lengthy hearings on the standardization of bread, with the vitamin and mineral content of the new enriched bread as the major issue. According to the enrichment program started in January by the National Research Council, the bread should contain three members of the vitamin B complex (B₁, B₂, nicotinic acid), and FDA is expected to follow this lead. But representatives of the dairy industry are plumping for an enriched bread that contains the entire B complex, or, ergo—more milk products.

Without waiting for the new labeling regulations to go into effect, FDA pulled a surprise rabbit out of its hat by seizing a quantity of "Quaker Puffed Wheat Sparkies," highly-advertised, fortified breakfast food, on the charge of mislabeling. Labels stated that, by eating Sparkies with fruit and milk, consumers would get 40% of their daily requirements of vitamins A, B₁, B₂, C, and D. FDA said that, while the labels might have followed the letter of the truth, they gave the erroneous impression that all these vitamin requirements were supplied by the cereal alone, without the help of the fruit and milk.

LABOR

Aviation Formula?

Regional stabilization gets strong support, but union rivalry and demand for wage parity with autos loom as difficulties.

Labor stabilization agreements for the aircraft industry, similar in many respects to those now operative for shipbuilding (BW—Apr. 19'41, p38), came a step closer to realization this week. Important factors in the industry echoed the statement issued by the Aeronautical Chamber of Commerce that manufacturers "will actively support a regional labor wage stabilization agreement . . . if the government approves the program and makes it economically possible."

• **Douglas of Douglas**—Some firms were holding back—or so their silence was interpreted—but with such figures as President Donald Douglas of Douglas Aircraft pledging "whole-hearted and enthusiastic support," employer opposition was deemed inconsequential.

Douglas has long been regarded as the symbol of the industry's resistance to outside unions, and his present point of view is of considerable significance because acceptance of contractual relations with outside unions is certain to be a condition provided for in the agreements. It was a condition which a number of firms were expected to balk at; particularly because C.I.O. and A.F.L. unions have not been recognized by about 70% of the industry.

• **Industry's Goals**—The two basic objects of a labor stabilization pact for aircraft are (1) to eliminate labor raiding between employers by standardizing conditions and wages and (2) to eliminate strike causes by raising wages, according recognition to outside (A.F.L. and C.I.O.) unions, setting up workable grievance-handling procedures, and providing for arbitration of disputes.

If aircraft employers accept unionism, the only other item on which they may have reservations is wage increases. And that is expected to boil down—not to a question of yes or no—but to a question of how much.

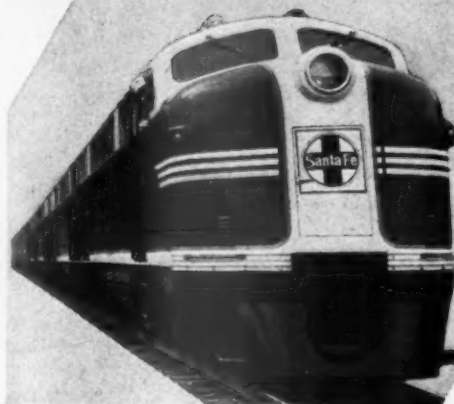
• **Planes vs. Autos**—There is an important section of opinion within the OPM which holds that aircraft labor will never stabilize until wages equal those paid in the automobile industry. In support of this position, the C.I.O. organizing campaign is cited. The most effective organizing argument in the whole C.I.O. bag of rhetoric has been the assertion that aircraft workers were earning less per hour than auto workers. It has been a



The Little Man Who's Always There!



You're right to EXPECT SERVICE



WITH
SANTA FE'S
NEW
DIESEL
FREIGHT
LOCOMOTIVES
!

Santa Fe now puts at your service the world's most powerful Diesel freight locomotives—with a top "in service" speed of 75 miles an hour and a non-stop range of 500 miles . . . Thus Santa Fe assures faster modern freight schedules, with the highest standards of efficiency in every shipping detail!

Santa Fe Service Now Provides:

- *Sixth morning delivery at Pacific Coast points from Chicago.*
- *Fifth morning delivery at Pacific Coast points from St. Louis, Kansas City, St. Joseph, Atchison, and Leavenworth.*
- *Third morning delivery, Chicago to Galveston, Houston, and Beaumont. (Less carload and carload merchandise.)*
- *Second morning delivery, Chicago to Oklahoma City.*
- *The only overnight freight service, Chicago to Kansas City.*
- *Free pickup and delivery service on less carload merchandise.*



For the most advanced freight service in the world today ship Santa Fe, whether a trainload, carload or single package. Call your nearest Santa Fe representative, or write

J. J. GROGAN
GENERAL FREIGHT TRAFFIC MANAGER
CHICAGO, ILLINOIS

How to use advertising to help c

JUST OFF PRESS—this new valuable book, "HOW TO HELP CUSTOMERS AND PROSPECTS—A Guide Book for Business Paper Advertisers." Timely, helpful material on today's problems for every executive to read and discuss with his advertising manager and agency. Use the coupon for your **FREE** copy.

HAVE priorities bitten off most of your production? Are your deliveries running behind? Is your sales force overpressed? Whatever your situation—are you concerned about keeping customers informed, protecting goodwill and rendering substantial service?

This new book, "How to Help Your Customers and Prospects" will help you. It contains page after page of examples of how other business men are meeting similar situations with well-planned business paper advertising to "talk" to customers and prospects about problems of mutual concern. It will give you a fresh understanding of the great versatility of advertising—the many practical uses to which it can be put.

Here is the starting point for answering your own problems. Here are practical ideas and timely suggestions for you. Here are answers to the many proper questions you may have been pondering as to how to get the greatest use from business paper advertising today.

Here, definitely, is help on "oversold." Here

44 PAGES PACKED WITH HELPFUL ANSWERS TO QUESTIONS LIKE THESE

"How can we keep the goodwill of customers we cannot serve now?"

"How can we offer specific help to our customers and prospects who have their own production and delivery problems?"

"How can we relieve pressure on our overloaded sales and engineering staffs?"

"How can we best advise customers and prospects of our efforts to expand facilities, improve deliveries and service?"

"How can we quickly and economically advise customers of auxiliary attachments or improvements better methods to speed production on old machines?"

"How can we develop inquiries and orders if our sales force is overpressed or inadequate?"

"How can we develop new markets for our products or build up other items on our line we can supply?"

"What can we do now to build and stabilize future business?"

are ways and means of reducing the load on your salesmen, sales engineers and service departments. Here is a book to read and put in the hands of your other executives—and certainly to discuss with your advertising manager and agency. Send the coupon today for your **FREE** copy.

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selling point which induced thousands of aircraft employees to join the C.I.O. To peg wages below auto scales, argue many of OPM's labor specialists, is to ask for trouble.

• **Whose Money?**—Many aircraft employers agree with this point of view. But, scanning their own pay scales—

with minimums ranging from 50¢ to 75¢ an hour in various plants, as compared with auto's 85¢ to 95¢ rate—they calculate that it will cost perhaps an additional \$250,000,000 a year to achieve payroll parity with automobiles. Where, they ask, is the money going to come from? And there is unanimity in making the point that it can't all come out of the 11.2% profit which the industry made in 1940.

The inference is clear that, if substantial pay increases are going to come at government instigation, they will have to come out of increased prices for planes. In practical terms, it means that

the industry is going to demand that the government reopen existing contracts to insert price escalator clauses where they do not now exist.

• **Industry Divided**—But the industry does not present a solid front on the question of raising wages to the auto level. While there is general agreement on parity as an "ideal" arrangement, the matter of what's going to happen after the emergency passes divides manufacturers on present policy.

Those who oppose raising wages to the auto level argue that, with unionism entrenched as a result of stabilization agreements, any wage scale established now is going to be a fighting issue after the emergency is over and the government is no longer such an important customer.

• **Flexible or Not?**—The unions, they say, pointing to the labor experience of other industries, can be expected to use all their resources to maintain the gains chalked up now. If the industry is going to be profitable as a commercial enterprise serving private business, it may be necessary to reduce production costs. When that time comes, if the aircraft industry's wage bill is inflexible, ruin may be the fate of some producers.

If these opinions prevail, government officials responsible for working out the terms of the stabilization agreement may have to be satisfied with less than parity with the auto industry. Or, it is not unlikely that they may try for parity now and write a provision in the agreements calling for later wage adjustments to slide up and down on a cost of living index.

• **Union Rivalry**—Meanwhile, and before precise details can be discussed, the labor unions operating in the aircraft field have to be lined up. This may prove to be the most difficult part of the job, and a rock on which the whole plan may break.

A.F.L.-C.I.O. rivalry in aircraft has been bitter and unrelenting. Finding some formula for apportioning the field between them, and getting them to agree to it, will be a herculean job. It is in recognition of this difficulty that Sidney Hillman and his aides are postponing official negotiations with the unions until employers have been fully sounded out.

• **The Coming Thing?**—One thing appears conclusive and that is, if government officials can find a workable pattern for labor stabilization in aircraft, with all the difficulties and complexities the situation presents, then stabilization pacts are going to be the coming thing. They will be written for a whole battery of industries which have never had the experience of regional or national collective bargaining.

They will provide an American parallel to British practice, which has long embraced industry-wide agreements.

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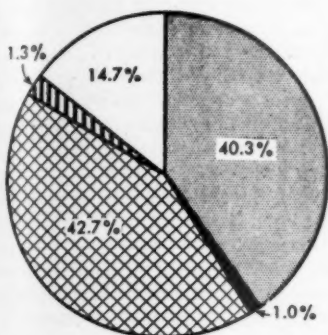


WILLSON
DOUBLE
PRODUCTS INCORPORATED
READING, PA. U.S.A.



HOW STRIKES END

More settled in 1940 by government action than by any other method.



METHOD OF NEGOTIATING SETTLEMENTS

- Employers and labor organizations
- Employers and workers directly
- Government officials or boards
- Private conciliators or arbitrators
- Terminated without formal settlement

For the first time since the Department of Labor started gathering statistics, a year's record shows that more strikes were ended by government intervention than by any other device.

The Labor Department has a dossier on 2,493 strikes, responsible for 6,679,745 man-days of idleness, which ended during 1940. Only 24 of them were brought to a close by the most ancient method of all: face-to-face talks between employers and strikers. These 24 were all small, involving a total of only 2,509 workers. The evidence suggests that this method of handling labor trouble is rapidly becoming obsolete.

Negotiations between management and labor organization representatives got 1,004 strikes settled; 200,168 workers were involved. For over a generation union-management conferences have proved to be the No. 1 technique for getting strikers back to work.

But 1940, with its unparalleled public interest in national defense and uninterrupted production, saw strikes become a problem in which the government took more and more initiative. Thus, government intervention in labor disputes is credited with settling 1,066 strikes involving 336,172 workers.

That trend is certain to be much more pronounced in 1941. Government is in the labor business for the duration.



MEET THE NEW "PRODUCTION-UPPER"

With defense production and overtime office work demanding "getup," you can't afford a summer letup. Install R & M fans *now* for efficiency and economical working comfort.

It's easy to choose the type and size of fan your business needs from the complete R & M line—powerful air circulators that deliver 5300 to 10,400 cubic feet of breeze per minute for cooling large working quarters; handsomely styled De Luxe fans for private offices; heavy-duty fans for general offices and key depart-

ments; exhaust fans for plants, laboratories, restaurants, and club rooms.

R & M fans are built by makers of better fans for more than 40 years. They are *fully guaranteed* to provide years of refreshing comfort with maximum breeze delivery and surprisingly low electric current consumption.

Keep cool for production. See your R & M fan dealer *today*—fan stocks are dwindling. Or write now for further details on the fan which interests you to Robbins & Myers, Inc., Springfield, Ohio—Founded 1878.

[Prices and specifications subject to change without notice.]

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HEAVY DUTY FANS
FOR GENERAL OFFICES



WINDOW FANS FOR
HOMES AND OFFICES



EXHAUST FANS
FOR SHOPS, RESTAURANTS

ROBBINS & MYERS Fans

ALL TYPES  ALL SIZES

EMPLOYEE RELATIONS

Defense Production Demands Labor Peace

By Paul Shoup, President,
Merchants and Manufacturers
Association of Los Angeles

As we build aircraft in numbers today we save the lives of soldiers tomorrow. As we create munitions in volume today, we keep the red line of battle away from our frontiers. As we furnish fighting craft to provide a two-ocean navy, we keep any foreign foe from setting foot on our soil.

In this situation our first line of defense, indeed, our only line of defense ready for action, is the production line. Whole nations now go to war. If we are realistic in our views we will look upon a break in this line of production of airplanes, ships, tanks, munitions, just as we would look upon a break in our battle line. One day's cessation in production may at one time or another spell disaster.

We are having strikes in our defense industries. A strike affecting 1,000 men may tie up 50,000. The ambition of groups, shortsighted in leadership — principally local in nature — has not been subordinated to the national good.

An instance — one aircraft plant in Southern California has turned out 15% of all military planes produced in this country. Radical leadership there caused a strike, withholding production from national defense. Dare we risk, even for a day, 15% of our defense in the air, whether in America or over the English Channel? What a difference in the result it might make! Can you think of a battle line with 15% of the troops going voluntarily out of action?

Our appeal must be to the good understanding, the goodwill, the patriotism, the enthusiastic cooperation of all who have anything to do with this production line. A sense of responsibility must govern management and men, and in their effort they must have the support of our government, national, state and local, and of everyone of us as a free American citizen having a flag to defend.

★ ★ ★

This article, written by Paul Shoup as an independent observer, is published as a matter of interest to both employer and employee.

Connecticut General, through the Protected Pay Envelope Plan of modern group insurance benefits, offers forward-looking organizations a powerful aid to better employer-employee relations.

CONNECTICUT GENERAL LIFE INSURANCE COMPANY

Connecticut General Life Insurance Co.,
Hartford, Connecticut

Please send copy of "The Protected Pay Envelope."

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Company.....

Address.....

Employer "Strike"

Efficiency of "boss union" technique is tested again as San Francisco restaurateurs try to force workers to bargain.

Quite apart from the novelty of a labor dispute in which employers demand (and the unions refuse) collective bargaining, the clash between 100 "name restaurants" in San Francisco and the Joint Board of Culinary Unions this week had special significance. It was another test of the efficiency of the "boss union" technique as practiced by the pioneer San Francisco Employers' Council (Report to Executives: BW—Oct. 26'40, pp40-46).

Restaurant owners involved are members of their own San Francisco Culinary Employers Conference, a unit of the Employers' Council. Until the recent squabble, the various A.F.L. culinary unions, representing about 1,800 men, would present the individual restaurant owner with a "shop card" containing wages, hours, and working conditions and specifying that the employer was subject to any further regulations the union might set up from time to time. Finally, irked by this practice, the restaurants decided to demand an industrywide written agreement.

• **Forcing the Issue**—Strategy was placed in the hands of Almon E. Roth, president of the Employers' Council, whose

first move was to rally support of the council's entire membership behind the embattled restaurateurs. Then, to bring "sharply to the attention of all culinary employees" that their unions had refused to bargain collectively, the employers announced July 2 a 25% reduction in wages effective until a master contract was created.

They emphasized that the agreement they wanted would not stipulate any reduction in wages but would set a scale "equal to or better than any in the United States."

• **Try to Negotiate Deal**—Restaurants closed progressively as employees walked out, until last Saturday some 60 had quit operating. This week union officials and restaurateurs went to work, attempting to negotiate the master agreement.

Vacation Resented

Thousands of miners rush to claim state compensation for week's shutdown that was provided under new contract.

The anthracite industry is recuperating, and the Commonwealth of Pennsylvania is trying to recuperate, from the first "paid" vacation ever granted in the hard coal diggings. Under the recent contract signed by the United Mine Workers Union and the anthracite operators (BW—May 24'41, p16), some 91,000 miners were idle during the



SCHOOL FOR SAILORS

On opening day, S. E. Lauer, president of York Ice Machinery Corp. greeted the first group of 15 Navy men who have started going to school at the York (Pa.) plant. The men are taking a six weeks' course in air conditioning and refrigeration, both of which are used extensively in modern

battleships and submarines—for such things as control of temperature and humidity in powder magazines and for preservation of ships' stores. In all, the school will handle a total of 45 machinists' mates, who will take their courses in groups of 15, and who will be assigned to naval bases and auxiliary vessels of both the Atlantic and Pacific fleets.

week of July 4. Instead of staggering the vacation schedule, the mines shut down in unison.

Newspaper readers who did not know the terms of the contract found the miners' attitude toward their vacation very perplexing. From the Pennsylvania coal camps came stories of torchlight parades protesting the shutdown, of milling crowds around pitheads demanding that they be allowed to work, and of mine guards reading the vacation notice to assembled miners and sweating to convince them that vacation was not the same as a lockout.

• **A Big Hangover**—After a couple of days, there were beer picnics in the woods, excursions to Scranton and Wilkes-Barre, and it was widely assumed that the miners had learned that a vacation was not a new kind of labor trouble. But last week, it became apparent that the holiday was leaving a whopping hangover.

Sixteen thousand miners stormed the State Unemployment Compensation Bureau offices to file claims to unemployment benefits for their week off. So great was the crush that special offices had to be established over the anthracite counties. Miners pounded tables and insisted that they had been unemployed for a week through no fault of their own and were therefore entitled to compensation. Harried state labor department officials rushed into print to say the claims had no validity.

• **Here's the Hitch**—Off the record, the officials cursed the terms of the union contract. What it provides is not vacation with pay in the usual sense. Instead, while calling for a week off this summer, the agreement decrees that each worker shall get a \$20 check for that week in the form of a bonus—at Christmas time. Unless the miners get their Christmas in July, there will be more legal tangles than state attorneys want to think about.

Girdler Will Sign

C.I.O. will be exclusive bargainer in plants where it has majority. Weir now outstanding heavy-industry holdout.

This week's announcement, by Board Chairman T. M. Girdler, that Republic Steel Corp. is prepared to grant exclusive bargaining rights to C.I.O.'s Steel Workers Organizing Committee in any plant where the union has a majority, is expected to take the country's third largest steel producer out of the labor trouble zone.

Although the Republic stand is a dramatic development, in view of the company's involvement in the "Little Steel Strike" of 1937, it did not come as a great surprise to either unionists or per-

INSURING TOMORROW'S WORK *with today's plans*

Today every ounce of energy . . . every pound of material . . . every dollar of our resources is behind the national preparedness program: To defend Americans—their principles—their way of living—their homes—their jobs.

To make this assurance doubly sure, plans for tomorrow must protect and permanently secure the advantages that will be gained by the work in which we are so diligently engaged today . . . protect it with improved facilities . . . for making better products . . . for less money.

New developments incorporating Twin Disc Hydraulic Drives are making past production records obsolete. Twin Disc Torque Converters are increasing the daily output in logging camps 15% to 20%. In the oil fields, Hydraulic Drives are speeding up drilling, lengthening the life of tools and equipment. Railcars equipped with Torque Converters are setting up new standards for economy, speed and passenger comfort. If you employ an internal combustion engine to power your equipment, you should investigate Twin Disc Hydraulic Drives. Complete description and illustrated applications are shown in Bulletin B-132. Ask for it on your business letterhead. TWIN DISC CLUTCH COMPANY, 1365 Racine Street, Racine, Wisconsin.

ILLUSTRATED: BELOW, Hydraulic Torque Converter and RIGHT, Hydraulic Power Take-off.





Accuracy to
Millionths of
an Inch with



Air Conditioning



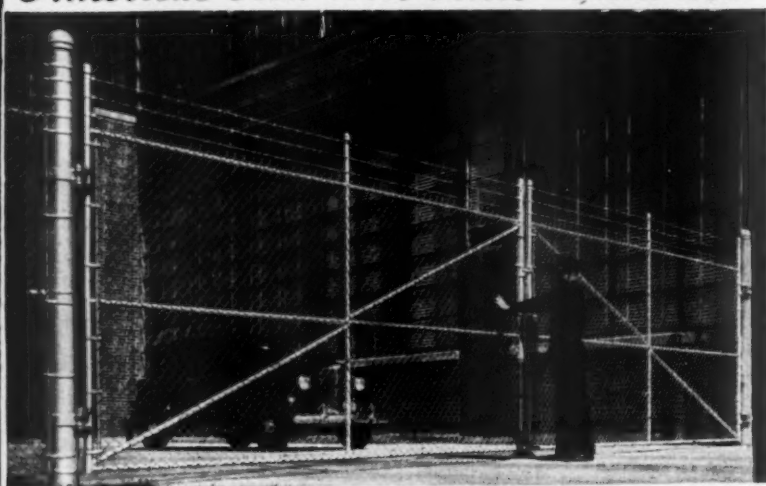
The parts for tanks, planes and guns, produced in thousands of separate plants, can only fit together properly if made in standard sizes, to accurate gages. Pratt and Whitney secure accuracy to millionths of an inch by finishing their Hoke precision gage blocks in this air conditioned room at West Hartford, Conn.

Standard conditions of 68° F. and 50% relative humidity are maintained, 24 hours a day the year 'round, with Frick Equipment. This working space, covering 16,800 sq. ft., is believed to be more accurately controlled than any other of like size in existence. Full credit is due the Automatic Refrigerating Co., Frick Distributors at Hartford.

Put your air conditioning problems up to the experts who have nearly 60 years' experience back of their recommendations. Write FRICK CO., Waynesboro, Pa.

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America's First Wire Fence - Since 1883



PROTECTION—ON THE LINE

★ The name PAGE not only identifies dependable property line protection but it is the symbol of quality that safeguards the investment. In Page Fence you get an assemblage of superior qualities, many of them exclusive. Page Winged Channel Posts are stronger and longer lasting. Page Fence fabric of copper-bearing steel is

heavily galvanized after weaving. All parts of the supporting structure are expertly made. And Page Fence is erected by technically-trained, long-experienced, responsible local business men. Write for "Fence Facts," to PAGE FENCE ASSOCIATION, Monessen, Pa., or Bridgeport, Conn., New York, Pittsburgh, Atlanta, Chicago, San Francisco.

See ACCO advertisement in this issue, page 60

A PRODUCT OF PAGE STEEL & WIRE DIVISION—AMERICAN CHAIN & CABLE COMPANY, INC.

sonnel men. For over a year, Republic plant managers have been meeting S.W.O.C. committees and settling grievances with them. This latest step simply formalizes an arrangement already in effect. The possibility of friction between company and union centered around the question of exclusive bargaining status. Girdler's statement, "We want to avoid any letdown in production from any cause," explains why the step was taken.

● **NLRB Audit**—Recognition rights will not depend on the outcome of a Labor Board election as they did in the Ford Motor Co. situation, with which the Republic controversy has often been compared. Republic has consented to accept an NLRB audit of union records as proof of S.W.O.C.'s strength. In addition, Republic and the NLRB have entered into a stipulation which provides for disposing of all unfair labor-practice charges against the company and a formula for settling back-pay claims in discriminatory-discharge cases.

● **Weir Still Holds Out**—With Republic thus on the eve of negotiating contracts with the C.I.O., Ernest T. Weir and the companies he heads become the outstanding heavy-industry holdouts against following the lead of United States Steel and dealing with outside unions. The five-year old Weir-C.I.O. fight went into a new phase last week when Weirton Steel granted exclusive recognition to a new independent union. It was a move which, when counted along with Republic's action, will probably add fuel to the flames of C.I.O.'s and NLRB's attack on the company.

WORKER ATTITUDES

"How to Make a Morale Study," published this week by the National Foreman's Institute of Deep River, Conn., goes far in attempting to make a labor audit as scientific as a financial audit or a physical inventory. The author, Eugene J. Bengé, makes the point that self-deception about employee attitudes, always bad business, is especially bad right now in view of the exigencies of defense.

Illustrated with charts and tables, the Bengé study (price \$7.50) evaluates the techniques for surveying worker morale and measuring the results. Many companies that have conducted such surveys have found a valuable by-product—the mere running of the survey, by giving employees a chance to air complaints, proves immediately beneficial.

MOVING PLANT AND MEN

Philco Corp. is moving its battery division from Philadelphia to Trenton this week and is moving 200 of its employees with it. The transplanting is arranged for under the terms of a new agreement between the company and C.I.O.

United Electrical, Radio, and Machine Workers Union.

In addition to features providing an 8% to 10% hourly pay increase and a week's vacation with pay for the company's battery division employees, the contract says that Philco will pay moving expenses for the 200 workers employed in the plant that is being abandoned. For those who prefer to keep on living in Philadelphia, the company agrees to pay the cost of commuting daily the 33 miles to Trenton.

PICKING BARGAINING UNIT

Youngstown Sheet & Tube Co. and C.I.O.'s Steel Workers' Organizing Committee are winding up preliminaries before sitting down together and negotiating an agreement. Six of the company's plants—two in the Chicago district and four in Youngstown—are being subjected to a "card count" by the National Labor Relations Board.

In the count, S.W.O.C. will present membership cards signed by Youngstown employees. They will be checked against payroll records. If S.W.O.C. can demonstrate a majority in both districts, they will be adjudged one bargaining unit and the union will be accorded recognition. If the union shows majority status in one, and not in the other, the two districts will be considered separate bargaining units and S.W.O.C.'s certification won't cover both.

The whole procedure was established in a board stipulation to which both the company and union agreed.

MORALE-BUILDER

Stockholders of the Simmons Co., opening envelopes with dividend checks in them last week found a little note enclosed. Personnel men who read it, knowing that Simmons employees would be seeing it, too, tabbed it as a smart piece of morale-building. Pointing out the company's tie-in with national defense, the announcement said:

"One of the most spectacular contributions by your company was the speedy handling of an order from the Navy Department which was received on a Friday afternoon at 5:30. This order called for 2,075 mattresses to be delivered to the Brooklyn Navy Yard by 8:00 p.m. the next day. Our plants have been closed on Saturdays on account of the 40-hour week, but our employees co-operated wholeheartedly in rendering this emergency service to their government. These men went to work in the late evening and worked all night. As a result, the entire quantity of mattresses was delivered on time, although it seemed like an impossible task when the order was placed.

"Great credit is due to our employees for their loyalty in this, and other important transactions."

THE NATIONAL CITY BANK OF CLEVELAND



Statement of Condition

JUNE 30, 1941

ASSETS

Cash and Due from Banks	\$102,871,192.33
United States Government Obligations	59,787,525.96
Other Securities	16,528,161.95
Loans and Discounts	63,799,441.83
Banking Premises Owned	1,500,000.00
Other Real Estate Owned	46,873.93
Customers' Liability on Acceptances and Letters of Credit	4,040,938.51
Customers' Liability on Loan Commitments	1,733,460.87
Accrued Interest	457,674.99
Other Assets	203,664.57
	<u>\$250,968,934.94</u>

LIABILITIES

Capital Stock	\$ 9,000,000.00
Surplus	4,400,000.00
Undivided Profits	1,282,276.41
Reserves	2,333,690.45
Acceptances and Letters of Credit	4,540,938.51
Loan Commitments Outstanding	1,733,460.87
Accrued Interest and Expenses	243,975.81
Deferred Credits and Other Liabilities	382,076.65
Corporation, Individual and Bank Deposits	\$185,043,042.75
Savings Deposits	30,744,459.03
Trust and Public Deposits	11,265,014.46
	<u>227,052,516.24</u>
	<u>\$250,968,934.94</u>

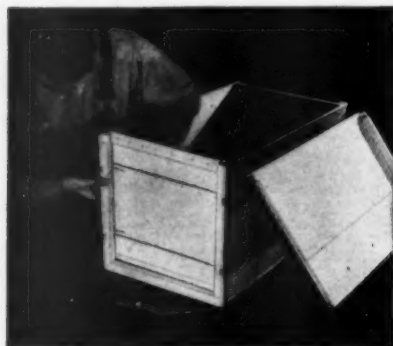
NOTE: United States Government obligations carried at \$12,104,980.99 are pledged to secure trust and public deposits and for other purposes as required or permitted by law.

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Two-thirds of its assembly is completed before the General All-Bound box reaches your plant. Lost motion is eliminated. Valuable man-hours are saved. Packing and shipping can keep pace, easily and economically, with stepped-up production.

As General All-Bounds are shipped and stored flat they take up less than one-fifth of the space necessary for made-up containers. After packing, they can be firmly closed and sealed fast, simply by bending the lower wire loops downward.



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General All-Bounds are used for nearly every type of product in shipments up to 500 lbs.

Send for your free copy of the booklet "How Research Can Save \$\$ for You." It shows how General All-Bounds and other boxes, crates and special containers, speed up and economize shipments of all shapes and sizes.

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District Offices and Plants: Brooklyn, Cincinnati, Detroit, East St. Louis, Kansas City, Louisville, Milwaukee, New Orleans, Sheboygan, Winchendon, Continental Box Company, Inc.: Houston, Dallas.

GENERAL BOX COMPANY
502 N. Dearborn St.
Chicago, Ill.

- ☐ Send a free copy of the new booklet "How Research Can Save \$\$ for You."
- ☐ Have a General Box engineer call.

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Address

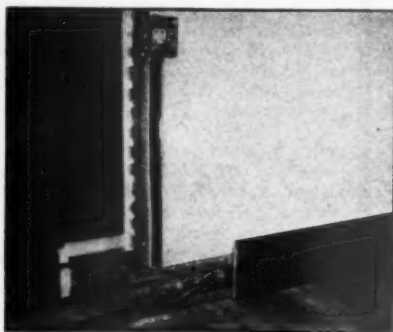
City State



NEW PRODUCTS

Electrified Baseboards

Baseboards will do double duty when a building is equipped with the new Erecto-Luxtite-Conduit Base developed by Charles E. Barnes & Son, 4320 Osage Ave., Philadelphia, for they will carry and conceal all telephone, radio, and service electrical connections. No "fishing" for wires is ever necessary be-



cause the baseboard fronts, whether wood or metal, are snapped to the conduit with strong steel clips and can be removed quickly without tools for installing additional wires or outlets. If extra speed is required in building or remodeling, the painter can be finishing the removable fronts while the electrician is completing his end of the work.

Drivometer

Screwed to the floor of a truck, bus, or other vehicle, the Drivometer is an instrument for registering separately the exact number of rough starts and stops which scare passengers, injure freight shipments, and send cars to the maintenance shop. As made by Electric Service Supplies Co., 17th & Cambia Sts., Philadelphia, it consists of two balls, two inclined tracks, and two mechanical counters in a 2½x4x6½-in. steel case. A quick stop or start rolls a ball far enough up an incline to move a counter.

Polishing-Wheel Dryer

Newest application of near-infra-red-ray heating is in the Siefen Polishing Wheel Drying Machine, which promises to dry wheels set up with cold glue in ten minutes. J. J. Siefen Co., 5657 Lauderdale St., Detroit, is building several models with capacities from 6 to 100 wheels per hour.

Sensitive Fire-Detector

Attached to the ceiling of any room, the Spot Fire Indicator will sound a bell or other warning signal when the temperature rises at a speed of 15 degrees per minute or more. Though it

has an outside diameter of only 3 in., it will protect an area of 30 x 30 ft. Lowe Laboratories, Inc., 40 Worth St., New York, is the manufacturer.

Resistant Paint

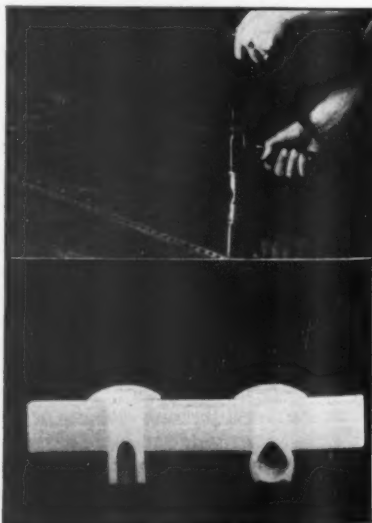
Formulated by United States Stone-ware Co., 40 E. 42nd St., New York, for the protection of metal, concrete, and wood surfaces, Tygon Paint is resistant to practically all acids, salts, alkalis, and oils, except concentrated formic, fuming nitric, and glacial acetic acids. It is completely resistant to hydrofluoric acid which even attacks chemical stoneware. The material, which has a modified halide polymer base, is also available in the forms of sheets, tubes, and moldings.

Self-Reflecting Sunlamp

The new Mazda RS Sunlamp with in-built reflector screws into a standard light socket, requires no special fixture, produces more available ultra-violet and infra-red rays than a July sun. Both General Electric Co., Nela Park, Cleveland, and Westinghouse Electric & Mfg. Co., Bloomfield, N. J., will make it.

Explosive Rivets

Working from only one side of an aircraft assembly, one man and a special light, electric-heating gun will set 15 to 20 of the new du Pont Explosive Rivets per minute. Secret is a small charge of explosive in the shank of each rivet which



expands it accurately to a predetermined tightness when heat is applied momentarily to the head. Only aluminum alloy rivets are now in commercial production, but E. I. du Pont de Nemours & Co., Wilmington, Del., the maker is considering other metals and larger sizes.

DEFENSE BUSINESS CHECKLIST

• **Strip-Mill Capacity**—According to OPM estimates, the capacity of wide-strip steel mills to make light plates for ships, railroad cars, and other purposes will be increased 754,000 tons to a total of 2,480,000 tons by the early part of 1942. Present total annual capacity of the 13 mills rolling strip 54 in. or more in width is 12,941,400 tons, of which 1,726,000 is light plate capacity and 11,215,400 is strip capacity. A memorandum will be issued shortly requesting steel companies to allocate to strip mills plates better suited for strip mill production.

• **Priority for Canning Machinery**—In order to prevent loss of a portion of the 1941 fruit and vegetable crop, OPM's Priorities Division, in line with a civilian allocation program previously announced by OPACS, has issued an order setting up an A-2 preference rating which may be applied to deliveries of materials needed by plants constructing or repairing canning machinery and equipment. Rating, which took effect on July 9 and expires Aug. 31, applies only to materials on the Priorities Critical List.

• **Civilian Allocation**—OPACS has announced a civilian allocation program designed to assure adequate supplies of repair and maintenance parts for such privately-owned consumer goods as passenger automobiles, trucks and tractors, household refrigerators, stoves, ranges and water heaters, plumbing fixtures, and furnaces, including oil burners and automatic stokers. The program, which will be administered by OPM's Priorities Division, provides for allocation of available materials for repair and maintenance in these categories prior to the satisfaction of competing civilian demands.

• **Scrap Aluminum Plans**—OPM has announced a simplified plan for the disposition of scrap aluminum to be collected in the house-to-house canvass directed by the Office of Civilian Defense. The new plan calls for the designation of one or more collection depots in each state, which are to be announced shortly. Once the aluminum has been shipped to these points by local collection committees, OPM will conduct competitive bidding for the sale of aluminum to smelters having defense preference ratings. Proceeds will be deposited in a "scrap aluminum fund" in the Federal Reserve Bank at Richmond, Va., earmarked for purchase of processed aluminum for the construction of trainer planes.

• **Copper Order Extended**—The General Preference Order (M-9) which provided priority control over copper has been amended to extend control over copper-base alloys and fabricated products made from copper or from copper-base alloys, such as brass or bronze. The original order was designed to regulate the distribution of refined copper in prefabricated form by refiners. Other amendments to the copper order provided that all defense orders be given a rating of A-10 unless higher ratings are specifically assigned, and that copper products covered by the order may be shipped to non-defense customers only after all defense orders have been provided for.

TRANE—full speed ahead with Uncle Sam's Fleet



★ ★ ★ ★ ★

SCORES of vessels in America's first line of defense, the United States Navy, are equipped with Trane Thermostatic Traps and Trane Convectors. These vessels include ships of all categories from seaplane tenders and destroyers to the huge new super-dreadnoughts now under construction. Moreover, many of the new cargo vessels for the U. S. Maritime Commission incorporate Trane Blast Coils in their heating and ventilating arrangements.

The Trane factories at La Crosse are geared at a production level to meet the demands of America's armed forces. Trane Steam Heating Specialties, Convectors, and Unit Heaters by the thousand are being installed in army and navy camps, cantonments



and air bases throughout the country. There are 85 Trane branch offices in as many leading cities of America where you will find a Trane representative with up-to-the-minute information to assist you in the solution of your heating, cooling and air conditioning problem with the nation's most complete line of heating, cooling and air conditioning equipment—the Trane line. Keeping in step with America's national defense requirements is Trane's big job of the hour.

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HEATING • COOLING • AIR CONDITIONING EQUIPMENT FROM 85 OFFICES

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Proven & Guaranteed
FLUORESCENT LIGHTING SYSTEM

- ... **That's 30% to 50% cheaper to install!**
- ... **That provides 50 Foot Candles or better!**
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IVANHOE
"50 FOOT CANDLER"
RLM Continuous Wireway
FLUORESCENT
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● Two years ago IVANHOE "50 FOOT CANDLER" was introduced as the first RLM Continuous Wireway Fluorescent Lighting System providing new higher levels of overhead illumination. Now its merits have been *proven* in such outstanding organizations as Fairchild Aviation Corp., Uxbridge Worsted Co., Combustion Engineering Co., General Electric Co., Curtiss-Wright Corp., and many others. Hundreds of miles of "50 FOOT CANDLERS" are today giving satisfaction in key Defense plants, industry and business.

"50 FOOT CANDLER's" continuous wiring channel (containing all necessary auxiliaries and up to 80 per cent of conduit) means installation savings of 30 to 50 per cent. Speedy installation, too—with no slow-up of production while lighting is going in. Easy-to-remove, porcelain-enameled fixtures lick maintenance headaches.

IVANHOE "50 FOOT CANDLER" can give you these *proven* lighting benefits in your establishment. Write for helpful Bulletin 1C.



THE MILLER COMPANY
MERIDEN, CONN.
Planners in Good Lighting Since 1944



FAIRCHILD AVIATION CORP. employees get 50-55 foot candles of light for fine inspection and assembly jobs with "50 FOOT CANDLER" in this new plant addition.



COMBUSTION ENGINEERING CO. use their new "50 FOOT CANDLER" lighting system to give draftsmen 60-65 foot candles of unmatched working light.



UXBRIDGE WORSTED CO. use many rows of "50 FOOT CANDLERS" in their weave rooms. Here workers have the production aid of 50 foot candles of well-diffused illumination.

FINANCE

Chain-Bank Truce

Stoddard-Bohn institution, upheld in courts, may close big deals before Michigan legislative fight resumes in October.

Michigan's troublesome branch-banking fight (BW—Mar. 8 '41, p. 57) has, for the moment, been recessed. After a legislative setback, the antibranch forces are taking time out to enlist new support.

The chain-banking forces are personified in Howard J. Stoddard (of the Utah Eccles family) and Charles B. Bohn (of Detroit aluminum industries). They are backed in politics by the Democrats, whereas the unit bankers of the state usually have the Republicans behind them when they need a vote or a helping hand. Messrs. Stoddard and Bohn slipped the unit bankers an unpalatable fait accompli last fall when the Comptroller of the Currency chartered the Michigan National Bank, of Lansing, with five offices in Michigan cities and with Stoddard as its head.

● **Legal Distinction**—Without a dissenting vote, the Michigan Supreme Court recently upheld the chain bankers' position that, although it is clearly illegal for a bank to open branch offices anywhere in the state except in the immediate neighborhood as permitted by the statute, there exists no prohibition against taking over an existing bank and keeping it as a branch.

To freeze the Michigan National Bank in status quo, and to prevent pulling any subsequent chains through this same legal loophole, the Republican legislature at once enacted the Brake bill, specifically forbidding such goings-on. The Democratic governor vetoed it. The legislature last week, meeting after a recess, undertook to override the veto. The effort succeeded in the lower house, but narrowly failed to get the necessary two-thirds majority in the Senate. Thereupon, in hopes that more of the rural Republican senators could leave their crops for the state house in autumn, the legislature adjourned the session for 90 days until Oct. 9.

● **Pending Deals?**—Sidelines observers who have thus far called every shot now look for some rapid action by the Michigan National Bank to close a couple of pending deals lest the forces of unit banking in October rally enough votes to block them.

Long rumored under negotiation has been the purchase of the First National Bank & Trust Co. of Kalamazoo by Stoddard and Bohn from the receiver of the defunct Union-Guardian group.



MOVES UP

Working for the Securities and Exchange Commission is gradually getting to be a career for a young man. Edmund Burke, Jr. (above), director of the reorganization division, last week was chosen by President Roosevelt to become a member of the commission. Only a short time ago Ganson Purcell, head of the trading and exchange division, was promoted to a commissionership. In making previous appointments, the President always has chosen outside the ranks of the commission's staff. Burke succeeds OPACS's chief, Leon Henderson, and was backed for the job by Justice Frankfurter and Thomas G. Corcoran.

which still controls this institution. Lately there have been reports that the Jackson City Bank & Trust Co., of Jackson, is also dickering with the Michigan National. These are two of the really big country banks in the state, and their acquisition would distinctly help the chain to reach the goal toward which it is apparently moving.

• **State's Fifth Bank**—The Michigan National Bank has total footings of more than \$60,000,000. It is Michigan's fifth largest bank, surpassed in size only by Detroit's four majors. The Kalamazoo bank has about \$16,000,000 and the Jackson bank about \$13,000,000. Add these to the Michigan National's existing totals, and it climbs right up among the Detroit institutions for size.

The competitive significance of the growth of the Michigan National Bank is all too apparent to other banks doing business in the state. Its capitalization now permits it legally to loan \$500,000



Checking Account with the POST OFFICE?

Certainly! *Thousands of firms have one! . . . First, you need a Postage Meter. Take the portable Meter down to the postoffice. Buy any amount of postage you like from \$1 up . . . Instead of handing you loose stamps, the postoffice man merely sets your Meter! The visible counters show your postage credit, postage expended. The Meter can hold any amount of postage, cuts down trips to the postoffice. And the postage in the Meter is safe as money in the bank!*



Back in your office, replace the Meter in the Pitney-Bowes mailing machine. It provides any kind of postage for any kind of mail . . . prints a meter stamp, postmark and your own advertisement directly on the envelope, seals the flap at the same time—fast!

The Meter stamp is your check, cancelled when printed. The meter number is your signature, exclusive with your firm . . . And Metered

mail needs less handling in the postoffice, can often make earlier trains—and earlier delivery!

The Pitney-Bowes Postage Meter gives the convenience and protection of a checking account, saves time, effort and postage. There's a model for every business, large or small; takes little space, can be operated by anybody, costs a lot less than you think . . . Ask our nearest office how to open a postoffice checking account . . . or use the coupon—soon!

...Pitney-Bowes Postage Meter Co., 1436 Pacific St., Stamford, Conn. . . . Branches in principal cities. Cf. phone directory. In Canada: Canadian Postage Meters & Machines Co., Ltd.

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PEOPLE

positions wanted

• **EXECUTIVE LIAISON**—Experienced in management; personnel office systems, sales. Specialist in problems of organization. Reputation for loyalty, and assuming responsibilities. Having also represented firms abroad, speak fluent Spanish, French, German. Good personality, habits, appearance. Age 35, married. Open to offers. Box 235.

• **PRINTING BUYER**, Sales promotion, Purchasing Agent, Production, have been employed on National accounts for the past 15 years, highest qualifications and best references. Box 253

• **EXECUTIVE**—manufacturer, trade association manager, experience in government relations, industrial and public relations, advertising campaigns, exhibitions. Box 255

• **SALES EXECUTIVE**, Experience covers sale and distribution of machinery to industrial plants, municipalities, machinery dealers, and contractors; also merchandising of mechanical appliances through jobbers and dealers. Age 43. Excellent record and references. Box 256.

• **PATENT LAWYER**—Twenty years' experience. Excellent record in winning infringement suits and in all branches of Patent Office practice. Desires full or part time employment. Box 257.

employment service

• **THOROUGHLY ORGANIZED SERVICE** of 31 years' standing and reputation, carries on preliminary negotiations for positions in the higher salary bracket. Procedure is based on an aggressive campaign individualized to each client's personal requirements. Moderate retaining fee protected by refund provisions. Identity covered and present position protected. Send only name and address for details. R. W. Bixby, Inc., 282 Delward Bldg., Buffalo, N. Y.

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• **PHOTOGRAPHS AND PERFORMANCE DATA** from the field for advertising purposes, catalogs, special displays, posters, exhibits, etc. Operates through 2700 photographers in the U. S., Canada, and Central and South America. Posed photographs, illustrations in any medium, retouching, designs, lettering, and other finished art work can be ordered at the same time as field photographic work. Drafting, technical illustrations, patent drawings, charts, graphs, publication and book illustrations, color separations, photographic and photostatic copy and enlargement work. Field Photo and Illustration Service, McGraw-Hill Publishing Co., Inc., 330 W. 42 St., New York, N. Y.

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• **FILING EQUIPMENT** serves best if properly used. Complete manual by expert office manager, comparing systems, instructing in all filing and indexing operations, only \$2.00, postpaid. Box 258

rental—home finding

• **TRANSFERRED EXECUTIVES GUILD**—150 correspondents in strategic cities to solve your home left behind or rental home-finding problem through our Interstate Realty Clearing House and Home-Finding Bureau. Sales, rentals, exchanges. Home Office, 1171 Washington St., Newton P. O., Boston Mass.



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NEXT ISSUE for "clues" ads August 2. Copy required July 28.

to a single customer, which means that it is already able to care single-handed for the loan requirements of all but the very largest firms in Michigan. All this is distinctly distasteful to the country

bankers who used to split up big loans among all the banks in town. The situation also irks Detroit, Chicago, and New York banks that used to get a share of the gravy.

THE MARKETS

Looking for "Sleepers"

Things were tamer on the New York Stock Exchange this week. It was the logical progression of events. The preceding week had seen industrial-share prices break through into the highest ground since last February (BW-Jul. 12'41, p70), while volume, at 5,293,000 shares for the week, was the best since last November. It was natural for things to slow up a little bit.

Nevertheless, 68 individual common-stock issues on the Big Board pushed on up to new highs for 1941 during the first two days of the week. These were the stocks of the hour, and even though the action of some may prove mere flashes in the pan, the composition of this list provides some interesting sidelights on the nature of current trading.

For one thing, no fewer than a dozen of these issues are selling for \$6 a share or less. These babies from the penny arcade quite possibly are not all wild speculations, but the cheap stocks usually can be tossed out in determining market leadership for the simple reason that their very cheapness makes them

attractive to uninformed, occasional followers of the market.

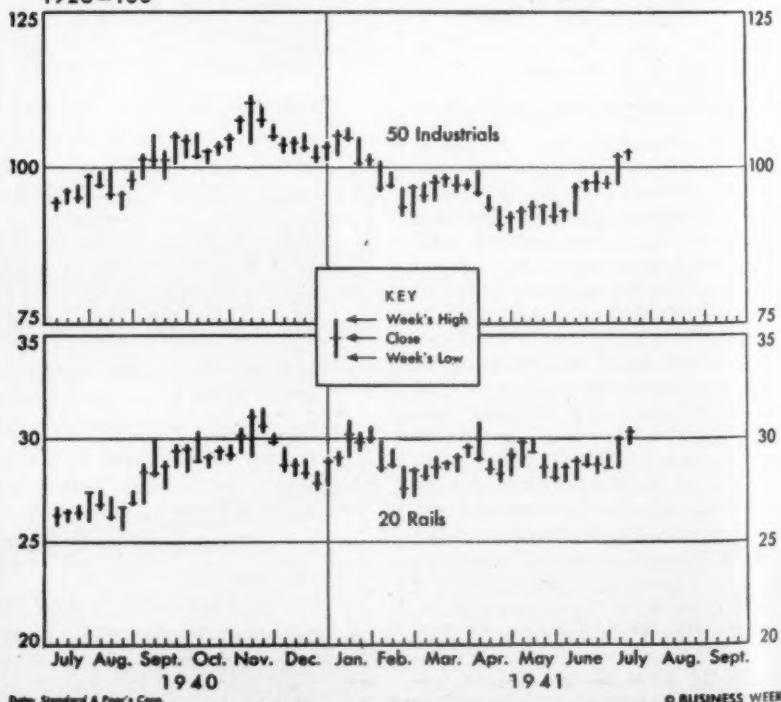
Looking at the more substantial issues numbered as top performers, it is a conspicuous fact that traders have been shopping around. Once more they have been testing the responsiveness of several long-neglected stocks representing consumer-goods lines. Inasmuch as most of these have moved within an extremely narrow range this year, it usually takes only a small push to send them to new tops for 1941.

Similarly, there have been new highs recorded in several stocks which rarely appear on the quotation tape. Traders apparently dug around for them with the idea that they might find some "sleepers." Thus it chanced that nine stocks that hit new highs on Monday and Tuesday of this week weren't even traded on Monday of the preceding week. And one of them set a new 1941 high by going a mere eighth of a point above the year's low.

Widest advance of the week was in one of the recently prominent farm-impliment shares. Several of the highs involved common stocks of railroads which are strictly in the category of special

COMMON STOCKS—A WEEKLY RECORD

1926=100



Date: Standard & Poor's Comp.

© BUSINESS WEEK

Does Speed of Construction Affect Sales of Building Products?

WHY

ANSWER:

"It often pays to buy a higher-priced building material because of the speed of construction it makes possible. I'm always concerned with the choice of building products and how they affect the speed of construction. Speed helps to make money on any contract job."

CONSTRUCTION SUPERINTENDENT

★ ★ ★

The above comment is typical of those received from readers of Engineering News-Record and Construction Methods engaged in engineered building work. Typical and significant.

Typical because so many of them say it. Significant because it emphasizes the tremendous engineering influence "speed of construction" exerts on the specifying and buying of building products.

Especially products for *engineered* buildings: mass housing, commercial, public and industrial buildings designed and built by (1) consultants, (engineering and architectural firms), (2) owners' staff engineers and (3) contractors.

Naturally, these men are "concerned with the choice of building products and how they affect speed of construction." For all three are responsible for keeping building costs down as well as owner satisfaction with the completed building. That's why all three have a powerful voice in making those important-to-you buying decisions. That's why it's essential to *sell* all three.

These construction men constantly seek new ideas and methods . . . watch eagerly for new products that help them build better at less cost. And current field interviews show that *all three* use Engineering News-Record and Construction Methods.

. . . the editorial pages to do a better job of building.

. . . the advertising pages to do a better job of buying!

★ Merck & Co. Laboratory, Rahway, N. J.



Products for construction of the Merck & Company laboratory (shown above) were bought by the White Construction Company, New York contractor. C. V. Chamberlain, construction superintendent, was in charge.

Materials were specified and plans drawn by Ballinger & Company, Philadelphia consultants. J. G. Harrison*, engineer, was in charge of specifications, and R. I. Ballinger*, president, passed on plans and specifications.

Here's how the buying influences on this job were covered by Engineering News-Record and Construction Methods paid subscribers: White Construction Co. — 7 ENR and 5 CM; Ballinger & Co. — 2 ENR and 1 CM.

*Readers of Engineering News-Record or Construction Methods.

How To Make Your Advertising More Profitable — Because of extensive field interviews with engineers and contractors, we believe we can help you make your advertising more profitable. We asked them what they wanted to know about building materials and equipment. Their answers will be mighty helpful in planning your advertising for results. Write for current field reports entitled "Tips on Selling Building Materials and Equipment" to A. E. Paxton, Manager.

ENGINEERING NEWS-RECORD ★ CONSTRUCTION METHODS

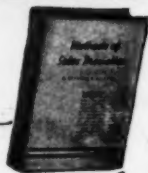
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Send me books encircled below for 10 days' examination on approval. In 10 days I will pay for books, plus few cents postage, or return them postpaid. (Postage paid on orders accompanied by remittance.)

Examine
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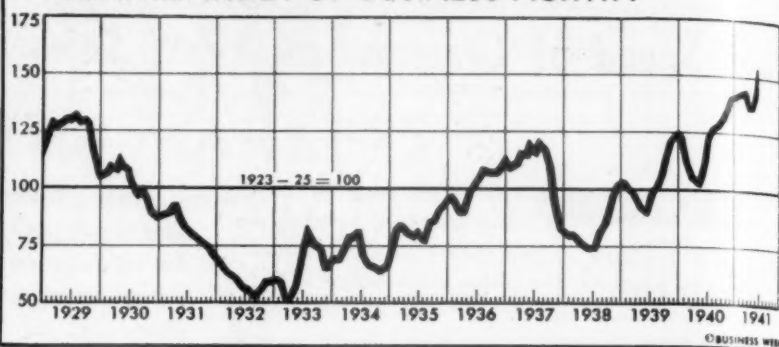
City and State

Position

Company BW-7-19-41

(Books sent on approval in U. S. and Canada only.)

MONTHLY INDEX OF BUSINESS ACTIVITY



Business Week's Monthly Index of Business Activity advanced to a new all-time high of 153.4 in June. This compares with 144.0 (revised) in May, and 123.3 in June, 1940. The previous

high was 144.6 for March, 1941. The *Annalist* Monthly Business Index (adjusted for long-term growth) advanced to 123.8 in May, against 117.8 (revised) in April, and 99.8 in May, 1940.

situations. A couple of rarely-traded paper issues scored good gains, and an inactive chemical also was something of a feature. An active favorite among the aircraft shares scored a new high, and so did a closely-held, high-priced member of the same group. Several oils were in a new high ground, and a gas utility approximately doubled in price within a week.

Security Price Averages

	This Week	Week Ago	Month Ago	Year Ago
Stocks				
50 Industrial	102.3	101.8	97.6	96.2
20 Railroad.....	30.3	30.0	28.7	26.5
20 Utility	45.9	45.4	45.1	62.1
Bonds				
20 Industrial	91.1	90.9	90.5	86.4
20 Railroad	66.8	66.8	65.8	57.7
20 Utility	101.1	101.0	101.2	100.4
U. S. Government	112.0	112.0	111.4	107.6

Data: Standard & Poor's Corp. except for government bonds which are from the Federal Reserve Bank of New York.

OUT AFTER BUSINESS

Year after year the New York Stock Exchange has watched its bond volume dwindle as the business went to the over-the-counter market. Of late, transactions in government bonds "on the board" have been utterly insignificant in relation to the "outside" market. Friday of last week, for instance, trading involved only \$10,000 worth of Uncle Sam's obligations.

In an effort to retrieve some of this business, the "bond crowd" has cut the commission charged on U. S. securities from $\frac{1}{2}$ of a point to $\frac{1}{4}$. Yet they did not at once attract any of those transactions running into millions of dollars worth of bonds at a single crack such as are commonplace over-the-counter. Volume on Monday, first day of the new rates, was only \$1,020,000. Next day it fell off to \$400,000.

COMMODITIES

Grain Embargo

Railroads, confronted with storage jam at Kansas City, refuse to accept loan wheat consigned to that point.

This country's bumper wheat crop—fifth largest on record—finally forced an unprecedented embargo action by the railroads. Carriers operating in the heart of the wheat belt announced this week that they wouldn't accept any shipments of loan wheat consigned to Kansas City. They now require shippers to certify that the grain is for sale and not for storage. Reason: is that 85% of the wheat arriving in that terminal has been for storage and the shortage of space has caused a pileup of 1,000 cars, all full of wheat and with no place to unload.

• **Storage Motive**—If growers borrow on their crop, they'll receive \$670,000,000 (BW-Jun.14'41,p70) at current government loan rates. If they sell at present market prices they'll receive somewhat less than that amount. So they naturally want to store it and let the highest bidder, Uncle Sam, take over.

The July 1 crop report by the U. S. Dept. of Agriculture points out that the expected yield of 16.3 bushels per acre has been exceeded only twice in 75 years. The new crop of 923,613,000 bu., plus the carryover of about 375,000,000 bu., will leave a domestic wheat supply for 1941-42 of about 1,300,000,000 bushels—nearly double the annual domestic disappearance in recent years.

• **Elevators Nearly Filled**—Much of the winter wheat crop has been directed to

Kansas City elevators, which now are nearly filled. Many terminals have been refusing grain and many farmers expect to be compelled to pile their wheat on the ground in the open for lack of space—and railroads might have to dump wheat along sidings.

Railroads made extensive preparation for this wheat-movement test of their efficiency by moving empty cars into the territory and by drafting a licensing plan whereby shippers could be required to show that terminal facilities were available, a plan which the grain trade wouldn't approve. Carriers assert that 20,000 available cars remain in the western territory and that the 1,000-car bog-down at Kansas City is due purely to the lack of elevator space for unloading.

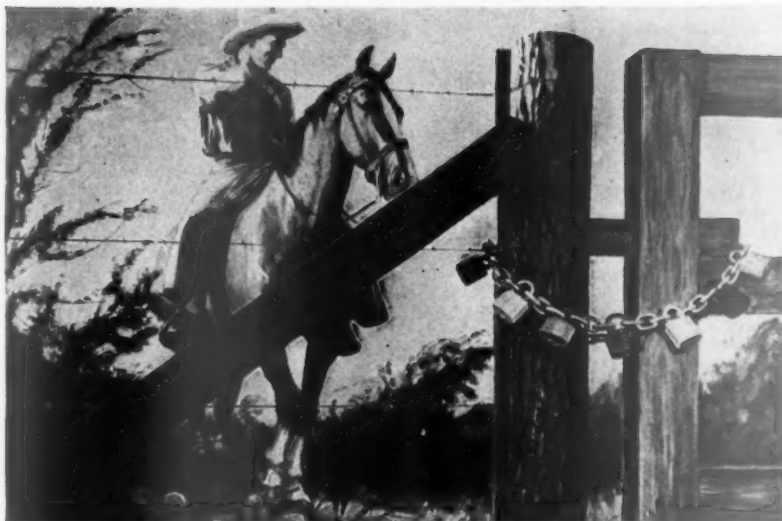
VANISHING MARKETS

The unhappy story of what happens to people who make their livings marketing raw materials when wartime controls nip their markets was told long ago in connection with the London Metal Exchange, and months back it began to become clear that some American markets faced a similar fate (BW—Feb. 15 '41, pp. 63-4). Full impact of government restraints now is to be seen in the case of the Commodity Exchange of New York. Price ceilings on copper, lead, and zinc cut heavily into trading in three of the exchange's important markets. Then the price order on hides further curtailed interest, and finally Uncle Sam took over all purchases and imports of crude rubber.

Only raw silk and tin of the Commodity Exchange's markets remained "free" at the end of last week, and it was an open secret in the metal trade that tin dealings were due to be taken over by the government just like those in rubber. Hence it was no surprise when the exchange announced with regret that it was "obliged to institute drastic economies, including the release of a considerable number of employees."

MORE FOR ROSIN?

At the beginning of this week, an interesting price study was made public which showed that rosin alone among the items listed was selling lower than at the outbreak of war in 1939. Within 48 hours it became known that men representing the naval stores trade were in Washington to see the Commodity Credit Corp. about upping the federal loan rate for rosin. Average loan rate on naval stores now is about 60% of parity, whereas the Secretary of Agriculture is permitted to grant 85% loans on "non-basic" crops. (The new farm loan law passed recently made the 85% rate mandatory only on big cash crops like wheat, cotton, corn, rice, and tobacco, leaving it permissive on other items.)



There stands a gate with 7 locks

At the south entrance of the great King Ranch in Texas there stands a gate. It is fashioned by lengths of chain, joined by seven padlocks. For each lock there is a key; for each key an employee. So, if a lock is left unfastened, someone has explaining to do. How simple! How effective! Like an unlocked gate, a valve failure can cause incalculable loss. But Nordstrom Lubricated Valves give 7-way protection. 1. Always easy to turn. 2. Leak-resistant. 3. Clog-proof. 4. Corrosion-resistant. 5. Abrasion-resistant. 6. Quarter-turn. 7. Handle highest temperatures.

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DUST DEFENSE *starts* at HOME!

DUST is a costly associate in business. It damages expensive machinery, soils products, increases operating costs, slows down production, lessens worker's efficiency. Yet dust is so easily controlled with Pangborn Steel Frame, Cloth Screen Collectors. A small investment now will end dust troubles for good. Talk it over with our nearest representative. Send for free booklet "Industrial Dust Control".

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WORLD'S LARGEST MANUFACTURER OF DUST COLLECTING AND BLAST CLEANING EQUIPMENT
PANGBORN CORPORATION . . . HAGERSTOWN, MARYLAND



Uses 20 Iron Fireman Stokers

Iron Fireman feeds the fires of industry—feeds them better—and makes substantial fuel cost savings.

Look, for instance, at the record of Iron Fireman performance at Lynchburg foundries (Va.):

Fuel cost per ton of metal **BEFORE \$3.25**
 Fuel cost per ton of metal **AFTER 1.08**
IRON FIREMAN fuel cost SAVING 2.17
% SAVING 67%

And that is only part of the story. Iron Fireman firing reduced production losses by controlled heat and decreased maintenance cost as well!

Learn what Iron Fireman Can Save YOU

What Iron Fireman does for Lynchburg foundries it may be able to do for your plant. There's an easy way to find out. You want to know. So do we. You say the word. We'll make a survey at our own risk and expense. Then you be the judge. Send the coupon—right now!

Right: Arthur Roberts, Jr., Chief Engineer. Below: Air view of Radford Pipe Works, Radford, Va., division of Lynchburg Foundry Co.



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BUSINESS ABROAD

Tiff with British

London, with eye on new lease-lend aid, quickly heeds Washington protest on steel competition in Latin America.

London and Washington had their first public wartime tiff this week, and the United States won its point.

The trouble, brewing for some time, grows out of the resentment among United States exporters over continued stiff competition from the British for certain important iron and steel business in South America. American steel interests protest that they have been forced to curtail all exports because of the huge British demands under the lease-lend law and because of the shortage of ships caused by the turning over of thousands of tons of bottoms to England. Under these circumstances, to run into British competition in South America caused bitter resentment which finally broke into the news a few weeks ago. But the issue is solved now. London withdraws.

• **What Is at Stake**—The actual business involved is not important—mainly steel tubes for an oil pipeline in Argentina, materials for electrification of the Central Brazilian Railway, and for a hydroelectric project in Brazil.

But the principle at stake is important, for it affects the whole future of American lease-lend aid for London. With the British already getting toward the end of the first \$7,000,000,000 provided by Washington, it would never do for London to be engaged in a controversy with the United States over steel shipments to South America just when President Roosevelt was about to ask Congress for another \$7,000,000,000 to help Britain.

• **Keynes' Announcement**—This explains the public announcement by Economist John Maynard Keynes, one of Britain's most important figures connected with the Washington embassy. Keynes said that England would not compete with American exporters in foreign markets with any products made of the same materials being received from the U. S. under the lease-lend act.

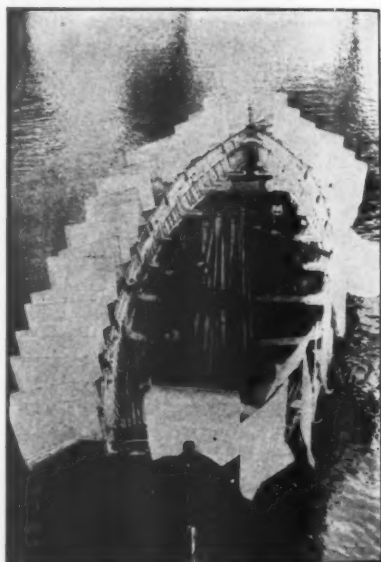
To business, the move is just one more step in the growing integration of British and American trade policies that is being forced by the war. Washington's new "blacklist" of Latin American firms known to be friendly to the Axis powers is really Britain's list of 1,600 to which another 400 names have been added by the agencies in Wash-

ington responsible for the new move. And the step to blacklist Axis agents was taken in Washington only after months of urging by the British authorities, who through their espionage system and censorship have uncovered the real volume of business still being transacted by Berlin and Rome.

• **Strict Check on Japan**—Tokyo is no longer suspect as far as transshipment to the Axis is concerned, but the latest tension in Japan is fresh reason for maintaining a strict check on Japanese agents too.

Washington's blacklist has been developed over the last 12 months mainly by Nelson Rockefeller's Office of the Coordinator of Commercial and Cultural Relations between the American Republics. Taking the British list of firms and agents in Latin America known to be definitely German or Italian, or to be doing business favoring those countries, the Rockefeller agents made their own check, cutting out some of the names because there was not sufficient evidence against them, but adding nearly 400 others which Washington believes are definitely anti-American.

• **Accounts Taken Away**—The committee has not waited until the list could be publicly announced to start using it.



LIFESAVER

Asbestos shields on the lifeboats of British oil tankers are the latest development to protect crews from torpedoed ships when surrounded by burning oil. An added feature of the screens is that they can be used as sails. Additional protection covers the boat's hull down to the water line.

Insiders say that more than 1,000 United States accounts have already been taken away from blacklisted agents in Latin America. In one case, a single agency lost 15 accounts within two months. But at the same time, the Rockefeller committee, with complete records on 5,000 Latin American firms and agencies, has been able to help United States business men make satisfactory new connections.

Another government agency has already made effective use of the blacklists. Washington's Export Control Division, headed by Brig. Gen. Russell Maxwell, whose duty is to prevent strategic materials from leaving this country unless they are specially licensed for British use, has already restricted shipments to companies on the blacklist.

Assurances to Be Required—When Washington's new priority system for Latin America is announced, it will require assurances from importers that they are not reselling at home to blacklisted companies, and some system of checks and penalties will unquestionably be installed to enforce the ruling. It is known, for example, that some drug firms in the United States have been selling goods to Latin America which Axis agents there have relabeled and sold as German products. That is how the Germans for a time kept up the fiction that they could maintain deliveries from Europe.

Another significant move by Washington—which also fits into the growing Anglo-American emergency cooperation program—was the definite announcement that the United States had completed a deal with Mexico for the purchase during the next 18 months of surpluses of all strategic materials. These include lead, copper, mercury, zinc, antimony, graphite, tungsten, tin, and bismuth. Petroleum, subject of controversy between the two countries since 1938 when American-owned wells were expropriated, was not mentioned.

Double Motivation—This is another of Washington's moves to aid Latin America by taking surpluses normally sold in Europe off its hands. But it is equally a move to keep these important materials from reaching unfriendly countries—especially Japan. A similar deal, but extending to two years, was recently made with Brazil (BW—Jul. 12 '41, p. 73). Insiders in the metal markets believe that deals of this sort will ultimately make New York the market through which all Latin American metals will be sold, rather than London as was often the case in the past.

The Mexican deal has been under negotiation for several weeks and it is expected now that similar arrangements to buy all strategic surpluses in Peru will follow. Large supplies of lead and copper are available there and Washington is eager to prevent sales to Japan and secure more supplies for use at home.



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WHITING

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OVERHEAD TRAVELING CRANES

Key Points in the Soviet Economic Front

While the month-old battle for Russia rages with mounting fury along the 2,000-mile front stretching from Murmansk to Odessa, armchair strategists are coolly appraising the stakes.

What will it mean in terms of munitions if Leningrad falls to the Nazis? What and where are the factories and mines in the Ukraine which make it the greatest industrial center in the Soviet Union? Where are the steel towns and the machine shops which make the region

around the Urals Russia's second industrial front? In the map on the opposite page, the key defense resources of European Russia are spotted, along with the vital defense towns. And in the list of cities below, the industries which make these towns important are tabulated. They constitute the stakes in the grim battle which will ultimately determine whether Russia can remain a great power or must yield the potentially richest territory in all Europe to the Nazis.

Astrakhan—Much of Russia's highest-grade caviar comes from Caspian Sea, one of richest fishing regions in the world. Cotton and fruit have recently become important farm crops along lower Volga.

Baku—Richest oil field in Europe. Pipeline carries oil to Batum for export. Much of oil delivered to Germany during last two years went by tanker from Batum across Black Sea to mouth of Danube.

Chelyabinsk—Second most important city (after Sverdlovsk) in Russia's vast new Ural Mountains industrial zone. Home of one of Russia's largest caterpillar tractor plants (now producing heavy tanks) and of a huge electro-metallurgical industry producing ferro-alloys for steel mills here and at Magnitogorsk. Also has one of Russia's large zinc works.

Dneprostroy—Site of Europe's largest hydro-electric plant which provides power for great aluminum and magnesium plants, for chemical factories which have been feverishly turning out war supplies during last two years, and for great steel mills which—with other mills at Krivoi Rog, Kharkov, and Moscow—provide nearly 60% of Russia's steel.

Gorki—Automobile factories here are largest in Soviet Union; in last prewar year, they turned out more trucks than whole British automobile industry. Also, home of one of the largest paper factories in Europe, of huge chemical plants, and of one of Russia's largest diesel engine factories.

Grozny—Second to Baku as oil producer. Also has big refineries and machine-building industry capable of supplying most repairs needed in the oil fields. Nearby is one of Russia's two big manganese deposits, large shipments of which came to U. S. until Mediterranean and Black Seas were closed.

Kazan—Russia's main fur-dressing center, handling 50% of country's catch. Also produces movie films, typewriters, soap, synthetic rubber. Center of large dairy region.

Kharkov—Home of half of Ukraine's heavy industries, with factories making tanks, machine tools, turbo-generators, locomotives, shells, guns.

Kiev—Capital of Ukraine. Its 800,000 population work in factories making all

kinds of household supplies as well as chemicals and some heavy machinery.

Krivoi Rog—Industrial center near European Russia's largest iron ore deposits; home of largest Bessemer steel plant in Europe and big agricultural machinery factories, now turning out huge quantities of war supplies.

Leningrad—Population, 3,000,000. Famous Red Putilov Works is Russia's biggest munitions factory. When Soviets attacked Finland two years ago they were after additional protection for Leningrad which is Russia's only good seaport. An outlet for rich timber export trade, the one-time city of St. Petersburg also claims 20% of machine tool industry.

Magnitogorsk—Russia's Pittsburgh. Site of "iron mountain" containing one-fourth of all Ural iron ore deposits. Blast furnaces 10 stories high annually produce 4,300,000 tons of pig iron. Also mined nearby: bauxite, chrome ore, nickel, gold.

Minsk—First Soviet city captured by Nazis. Small machine-tool factories—tool grinders, drill presses. Larger clothing and footwear industries.

Moscow—Population, 4,000,000. Capital of Soviet Union. Turns out one-seventh of Russia's total industrial production, half of which is heavy industry, including automobiles, ball-bearings, high-grade steel, machine tools, electric locomotives, precision instruments, building materials, railroad equipment, radios. One of world's largest publishing centers.

Murmansk—Year-round port, connected with Leningrad by single-track railroad, electrified from Kandalaksha to Murmansk. Outlet for newly-developed nickel, copper, apatite mines (largest in world). Supply route for equipment from Britain and U. S. Population: 1920, 2,000; 1940, 120,000.

Nikolaev—Most important shipbuilding center on Black Sea. Export outlet for vast manganese deposits nearby.

Nizhni Tagil—Huge copper refineries and metallurgical plants, asbestos factory. Also railroad car-building shops.

Novorossisk—Largest cement factory in Russia. Principal port for grain exports.

Odessa—Center for food, footwear,

jute and hemp, and chemical industries. Also shipbuilding.

Ordzhonikidze—Center for lead and zinc mining and refining. Also for lumbering and cattle breeding. In midst of region with huge potential hydro-electric power resources.

Orenburg—Center of large-scale mechanized farming region developed as food base for Ural industrial zone.

Orsk—Oil from big Emba field on shores of Caspian brought through 434-mile pipeline for refining and distribution in nearby Ural industrial centers. Large steam locomotive works.

Rostov—Center of Donetz coal basin, which accounts for more than half Russia's coal supplies. Huge agricultural machinery factories, now producing defense equipment. Important food industries, large tobacco factory.

Samara—Oil refinery, machine-building works, grain elevators, flour mills.

Saratov—Largest European harvester-combine works, and Russia's second largest ball-bearing factory (after Moscow).

Stalingrad—Electric power station; tractor and metallurgical works; oil distillery; sawmills; canning factories; important river-shipbuilding yards.

Sverdlovsk—Population, 500,000. Most important city in Urals. Junction of seven railways. Center of vast industrial combine utilizing Magnitogorsk iron and coal from Kuznets (central Siberia) to build heavy machinery. Probably Stalin's most important arsenal east of Urals. Carefully-hidden airplane factories probably in neighborhood.

Ufa—After Caucasus, Russia's most important oil fields, feverishly developed in last five years.

Yaroslavl—"Akron" of Russia, though synthetic rubber factories now are spreading beyond Urals where they utilize native-grown tausagiz. Also great textile mills, chemical plants, and automobile-parts factories.

Yerevan—Capital of Armenian Russia. Factories produce synthetic rubber, silk, shoes, clothing. Also flour-milling and cheese-making center. Several large new hydro-electric power plants in neighborhood.

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Inflation Worry

Canada is alarmed over tendency of food prices to get out of hand. Dollar exchange aided by influx of tourists.

OTTAWA—Canadians are beginning to become alarmed over inflation influences which are seeping across the border from the United States despite the tight hold Ottawa authorities have kept on prices since the outbreak of the war. Canada's worries come from several quarters.

Below the border, the demand for pork products has pushed bacon prices so high that the Canadian Bacon Board has twice in the last two months had to up its base price for the bacon it is buying for British account (page 14).

But not all of the trouble comes from south of the border. British food purchases in Canada are even larger this year than last, with the result that the domestic market is running short of a good many food items. Following last month's alarming advance in bacon prices, Canadians this week found salmon prices soaring. Best grade red salmon is already selling in the retail trade at around 40¢ a can, and consumers have been warned that further advances can be expected. Cheese is another staple diet item that has been going up.

• **Under Consideration**—Canadians have two plans under consideration to alleviate the situation. One is to use every possible means for boosting production. The other is to establish a system of controlled distribution. But even this plan demands cooperation with the United States if it is to work effectively.

Canada's tightening ties with the United States showed up in two other fields this week. Canadian Press, publisher-owned news service corresponding in the Dominion to the Associated Press in the United States, has followed the AP lead in creating a separate organization to supply news to commercial broadcasting stations. In a reversal of former policies, CP news, supplied through the new Press News Limited, will be available for broadcasting in sponsored commercial programs.

• **Influx of Tourists**—Growing United States interest in the Dominion's war-time efforts to aid Britain showed up unexpectedly last week in the large influx of tourists over the July 4 weekend. Since Canadians desperately need dollar exchange in order to maintain purchases south of the border, the arrival of 61,772 automobiles filled with tourists who spent freely while they were in the country was chalked up as an auspicious omen for a better tourist season than in 1940. This was 140% ahead of the same holiday traffic last year.

PROFIT & LOSS

Size, Please?

Farmers may be pleased to hear that Mr. Alfred A. Kollander of Stillwater, Minn., has been granted a patent for a "form-fitting" milk stool.

For God and Country

The old chain letter is having a revival again—this one inspired by the national defense effort. "DO NOT BREAK THIS CHAIN!" is what the old chain letters used to have written at the top. The new version is: "HELP YOUR COUNTRY!" The body of the letter has hardly changed at all though.

"Buy a 25¢ defense saving stamp . . . it says, 'and mail it to the person whose name appears at the top of this list. . . . Mail five copies of this letter. Leave off the name that appears at the top and add your own name to the bottom. . . . In this way you will help the country and also net \$781.25 for yourself.'"

Not bad pay for patriots at all.

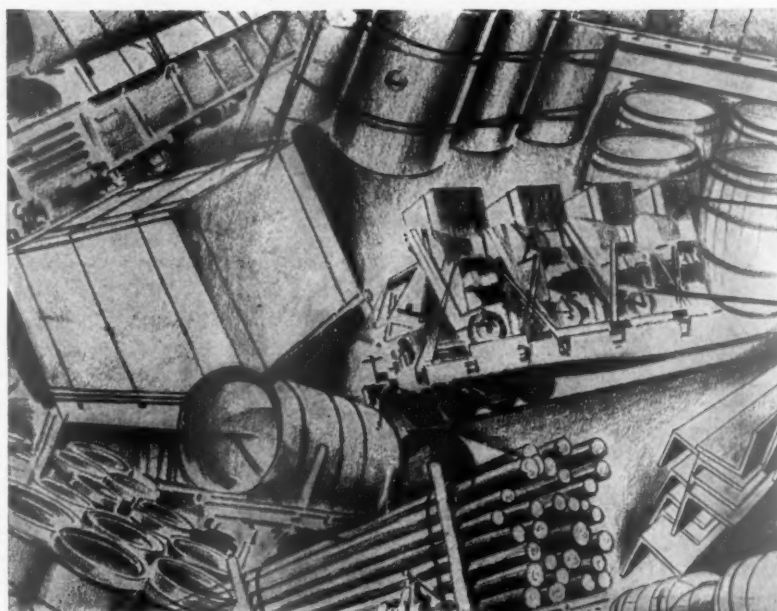
Bottleneck

An absolutely new kind of industrial bottleneck turned up at the Acklin Stamping Co. in Toledo, O., recently when there began to be so many regular delays and, in some cases, even actual stoppages of work among the women in the factory that the company had to investigate the situation. They discovered that the women had all been going to a fortune teller—the same one—who had been telling them all the same thing—to be very cautious between 2:30 and 3:30 every afternoon because they were in danger of serious accidents. As a result, the girls all got so careful in the afternoon they couldn't do a lick of work. The fortune teller got arrested for violating a fortune-telling ordinance, and work at the Acklin plant—if not exactly back to normal yet, is at least proceeding in a pretty orderly manner again.

Meet Mr. Jackson

The defense program is accomplishing some wonderful things. Business Week's Topeka (Kan.) correspondent heard about one of them the other day in a conversation a couple of traveling salesmen were having in the bar of the Hotel Roubidoux in St. Joseph, Mo. The boys were sitting there nursing their drinks when one of them looked up and noticed that another traveling salesman had just come into the room. "What's that guy's name?" the first traveling salesman said. "Seems to me I've seen him in a lot of places in my territory."

The second t.s. raised his head wear-



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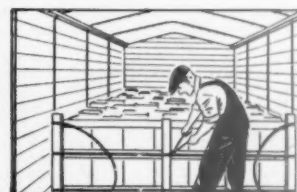
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ACME STEEL CO. 65	THE HINDE & DAUCH PAPER CO. 39
Agency—THE BUCHER CO.	Agency—HOWARD SWINE ADVERTISING AGENCY
THE AMERICAN PULLEY CO. 36	HOTEL LEXINGTON 20
Agency—THE AITKIN-KYNETT CO.	Agency—CAMPELL-EWALD COMPANY OF NEW YORK, INC.
AMERICAN TELEPHONE & TELEGRAPH CO. 3rd Cover	THE INTERNATIONAL NICKEL CO., INC. 9
Agency—NEWELL-EMMETT CO., INC.	Agency—MARSCHALE & PRATT, INC.
AMERICAN TRUCKING ASSOCIATIONS. 12	IRON FIREMAN MANUFACTURING CO. 40
Agency—THE BIOW CO., INC.	Agency—JOSEPH B. GERRER CO.
ASSOCIATION OF AMERICAN RAILROADS 33	MCGRAW-HILL BOOK CO., INC. 58
Agency—ARTHUR KUDERN, INC.	MCGRAW-HILL PUBLISHING CO., INC. 44, 45
ATCHISON, TOPEKA & SANTA FE RAILWAY 43	MERCO NORDSTROM VALVE CO. 59
Agency—STACK-GORLE ADVERTISING AGENCY	Agency—THE MCCARTY CO.
EDWARD G. BUDD MANUFACTURING CO. 2nd Cover	THE MILLER CO. 54
Agency—N. W. AYER & SON, INC.	Agency—J. M. HICKERSON, INC.
BUNDY TUBING CO. 41	NATIONAL BOARD OF FIRE UNDERWRITERS 29
Agency—BROOKE, SMITH, FRENCH & DORRANCE, INC.	Agency—GEARE-MARSTON, INC.
THE CINCINNATI TIME RECORDER CO. 46	THE NATIONAL CITY BANK OF CLEVELAND 51
Agency—FREDERIC W. ZIV, INC.	Agency—MCCANN-ERICKSON, INC.
CITY OF LINDEN 40	NATIONAL TECHNICAL LABORATORIES 20
Agency—A. W. LEWIN CO., INC.	Agency—DOXIER GRAHAM EASTMAN, ADVERTISING
CLUES 56	PAGE FENCE ASSOCIATION 50
CONNECTICUT GENERAL LIFE INSURANCE CO. 48	Agency—REINICK-ELLIS-YOUNGKRENN & FINN, INC.
Agency—EDWARD W. ROOTHAM & CO.	PAN AMERICAN AIRWAYS, INC. 31
THE DELTA MANUFACTURING CO. 30	Agency—BATTEN, BARTON, DURSTINE & OSBORN, INC.
Agency—IRVING J. ROSENBLUM ADVERTISING CO.	PANGBORN CORP. 59
EDIPHONE, THE. THOMAS A. EDISON, INC. 38	PENNSYLVANIA RAILROAD 37
Agency—FEDERAL ADVERTISING AGENCY, INC.	Agency—AL PAUL LEPTON CO., INC.
Agency—GEARE-MARSTON, INC.	PITNEY-BOWES POSTAGE METER CO. 55
ELECTRIC STORAGE BATTERY CO. 4	Agency—L. E. MCGIVENA & CO., INC.
ENGINEERING NEWS-RECORD 57	PULLMAN-STANDARD CAR MANUFACTURING CO. 23
ETHYL GASOLINE CORP. 1	Agency—CHARLES DANIEL FRY CO.
Agency—BATTEN, BARTON, DURSTINE & OSBORN, INC.	REPUBLIC RUBBER DIVISION LEE RUBBER & TIRE CORP. 2
FAIRBANKS, MORSE & CO. 10	Agency—WEARSTINE ADVERTISING, INC.
Agency—HENRI, HURST & McDONALD, INC.	ROBBINS & MYERS SALES, INC. 47
FELT & TARRANT MANUFACTURING CO. 19	Agency—ERWIN, WABBY & CO., INC.
Agency—N. W. AYER & SON, INC.	SANDERSON & PORTER 5
FRICK CO. 50	Agency—CALKINS & HOLDEN
Agency—WAYNESBORO ADVER. AGENCY	SHELL OIL CO. 27
THE FRIDEN CALCULATING MACHINE CO., INC. 67	Agency—J. WALTER THOMPSON, INC.
Agency—D'EVELYN & WADSWORTH, INC.	SOCONY-VACUUM OIL CO., INC. 4th Cover
GENERAL AMERICAN TRANSPORTATION CORP. 3	Agency—J. STIRLING GUTCHELL, INC.
Agency—FITZGERALD ADVERTISING AGENCY, INC.	THE TRANE COMPANY 53
GENERAL BOX CO. 52	Agency—BATTEN, BARTON, DURSTINE & OSBORN, INC.
Agency—THE BUCHER CO.	TWIN DISC CLUTCH CO. 49
GENERAL ELECTRIC CO. 34, 35	Agency—SPENCER W. CURTIS, INC.
Agency—BATTEN, BARTON, DURSTINE & OSBORN, INC.	WAGNER ELECTRIC CO. 4
GENERAL ELECTRIC CO. 38	Agency—ARTHUR B. MOORE, INC.
Agency—LEIGHTON & NELSON	WALDORF ASTORIA HOTEL 40
HALVORSEN 64	Agency—KENTON & ECKHARDT, INC.
Agency—WM. J. McDONOUGH, ADVERTISING	WHITING CORP. 61
HERCULES POWDER CO., INC. 25	Agency—THE FENSHOLT CO.
Agency—FULLER & SMITH & ROSS, INC.	WILLSON PRODUCTS, INC. 46
	Agency—JAMES G. LAMB CO.

ily. "Oh," he said, "his name's Jackson. Sells sparkplugs." He studied Jackson with narrowed eyes for a minute. "Customers used to call him Screwbolt Jackson," he added, "until there was a shortage of sparkplugs and he started rationing them out to the trade. Now they call him Mr. Jackson."

Business Music

The only real serious musical effort we know of with a solid business background is the International Business Machine Corp.'s ambitious "I. B. M. Symphony." Now there's another composition to join it—"Two Symphonic Impressions," played recently by the Chicago Symphony Orchestra—which owes its entire inspiration to vitamins. The program notes at the Chicago concert explained that the music was originally written for a ballet depicting a battle between preventive medicine and disease—with an introduction describing the discovery of vitamins; and it was suggested that listeners envisage a rachitic cripple during the music, who is restored to health and vigor by eating the right vitamins.

There's a chance that business will now have even another musical composition. General Electric ran an institutional ad recently, headed, "Out of the Night" ("Listen! You will hear them; staccato beat of rivet guns . . . crackle of welding torches . . . harsh whisper of turning lathes. The sounds of America working!")—it went along like that. Right away a man in La Grangerville, New York, wrote and asked G.E. if he could use "the third to sixth inclusive paragraphs as the basis of a musical setting for a mixed chorus."

Any day now we can expect a tone poem based on a cake of Swan soap melting in a bathtub.

Indian Givers

Chicago's civic organizations, lodges, and labor unions held a great meeting early this month with the Chicago commission on national defense, to pledge their aid in the nation-wide drive to collect old aluminum pots and pans. The meeting was progressing smoothly when suddenly a handful of cooks and press agents from two of the big downtown hotels came busting into the room loaded down with aluminum pots and pans. The defense commission said it would be happy to accept any useless utensils, and so the cooks handed everything right over while all the newspaper photographers took pictures.

Long after the meeting was officially over, though, one of the cooks was found hanging around in an anteroom. When they asked him what he was waiting for, he answered without a trace of embarrassment, "I gotta have my pot to make chili tonight."

THE TRADING POST

Last In: First Out

In The Outlook of May 24, Business Week made the point that from now on, during a period of rising prices, inventory replacement will be an increasingly important problem. "No longer are manufacturers, wholesalers, and retailers worried about being overstocked," The Outlook said. "Instead, they are trying to dovetail their purchasing-and-sales programs so as to have a constant basic stock of supplies on hand. What's the use of selling goods at a seeming profit above original cost, when the cost of replacement will be higher than the sales price? You have a paper profit, but an out-of-pocket loss."

What happens frequently nowadays is this. Assume a company with an inventory of \$100,000. Now assume that prices rise, so that the inventory cannot be replaced for less than \$200,000. When that company sells its inventory (at say \$200,000), it automatically registers a profit of \$100,000. But when it replaces its inventories, at a cost of \$200,000, it automatically wipes out that profit. The effect has been to mark up inventory by \$100,000, but the physical quantity of goods on hand has not increased by one ounce.

Now, however, assume that prices are fixed by the government. And let us suppose that the replacement cost of the inventory goes up 5%, while the selling price is held at \$200,000. Then, of course, you have an inventory markup of \$100,000, but the company actually has lost money since it will cost \$210,000 to replace the physical inventory the company started with. This is a hazard that is bound to develop under any form of price fixing. It suggests as a working maxim: An inventory in hand is worth two on the order books.

But from an accounting standpoint, business can readily guard against a false rise in profits through inventory markup during an inflationary period.

Commenting on the original statement in The Outlook, H. T. McNally, Chicago resident partner of Ernst & Ernst, accountants and auditors, points out that the "last-in: first-out" method of inventory valuation keeps a checkrein on artificial inflation of profits. The name of this method of keeping track of inventories is almost a perfect description of its operation. Here is how Mr McNally states the case:

The operation of a manufacturing, jobbing, or retail business usually requires a continuing investment in inventory. The exact total amount of raw materials, in-process, and finished products which may be necessary as a base stock or continuing investment in inventory of a specific company

will vary with changes in processing time, period of delivery of materials, number of items in the line, and other factors.

For a number of years, some large nationally-known companies have used the "base stock" method, in which a fixed portion of the inventory investment is carried at fixed values so as not to affect operating profit with fluctuations in the value assignable to this normal or base stock. The last-in-first-out principle is in reality an adaptation of this base stock idea.

Here's an example of "last-in: first-out" compared with the usual method:

Suppose a company starts its fiscal year with an inventory of 4,000,000 units, valued at \$1 each, or a total inventory of \$4,000,000. Suppose it turns over, in the fiscal year, 4,200,000 units; that is, it buys 200,000 units more; and suppose the average replacement cost of its inventories has risen by 25%.

Now, since its entire inventory has turned over, and the replacement cost has gone up 25%, it follows that it has at the end of the year, 4,200,000 units, at a cost of \$1.25, or an inventory of \$5,250,000. That's based on the normal method of calculating inventories at cost or market, whichever is lower.

However, if it applies the last-in: first-out principle, here's what happens:

Initial inventory, 4,000,000 units at \$1—\$4,000,000

Added inventory, 200,000 units costing \$1.25—\$250,000.

Resultant year-end inventory—\$4,250,000.

And since the actual replacement cost (or market value) of the total 4,200,000 units is \$5,250,000, the company has a hidden, untaken profit of \$1,000,000—just in case prices drop.

The last-in: first-out method of inventory treatment does not rule out the accepted method of evaluation of "cost or market, whichever is lower." Hence, during a declining market, inventories are marked down to market price, so there is no falsely inflated valuation of inventories when commodity prices decline.

The last-in: first-out procedure is peculiarly adapted to a rising market, because it keeps inventory profits out of the profit-and-loss account. On a declining market, the usual procedure of evaluating inventories to the lower of cost or market does that job automatically.

Mr. McNally points out that the last-in: first-out inventory valuation has been accepted by the Treasury, "if its use will clearly reflect the income of the taxpayer." And many of the proponents of the system make the point that it reflects operating results much more truly and realistically than the usual methods of valuing inventories—especially when inflation is in the air.



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SAN LEANDRO, CALIFORNIA

THE TREND

SMALL BUSINESS AND DEFENSE MONEY

We are now witnessing the most rapid expansion in commercial bank credit since 1929. In one year, reporting member banks have increased their business loans 33% to nearly \$6,000,000,000. This is well over the 1937 top of \$4,871,000,000. Yet, if you have any notions that credit is flowing freely during the defense boom in business, you have another guess coming.

• In a readable, 172-page, case-study book, just off the press—"Financing Defense Orders"—Lynn L. Bollinger, of the Harvard Graduate School of Business Administration, makes the point that small- and middle-sized companies sometimes have trouble getting working capital to meet increased inventory or payroll requirements. Big companies, of course, either can draw on their own cash reserves or get easy accommodation at their commercial banks. But the enterprise whose balance sheet totals up to less than seven figures oftentimes runs into a stony negation, even with such a seemingly bankable asset as a signed-and-sealed government contract. Here, for instance, is Mr. Bollinger's Case 5:

Early in 1941 a chemical company in a large eastern city applied for a bank loan needed to carry out a contract with the Chemical Warfare Service. The amount requested was greater than the bank would ordinarily lend to the company. The loan was of a type, however, which the bank would be willing to make for defense purposes with an assignment of the contract, provided the contract work was of a nature which the company was competent to handle. Upon investigation, the banker found that the product was secret and the War Department would not permit the manufacturer to give the banker a description of the process. The chemical company had relatively limited technical and managerial talent. The banker was, therefore, unwilling to take a chance upon the company's being able to produce a difficult product satisfactorily by an unrevealed process.

• And now consider Case 21, a subcontracting problem:

Early in 1941 the Warley Machine Co. (name fictitious), a midwestern corporation of substantial size, received an order from the Army for mechanized equipment. The nature of the work and the delivery schedule were such as to require extensive use of outside facilities. . . . The company attempted to utilize as a subcontractor a small machine shop which had previously done precision work for automobile accessory manufacturers. The shop had good tools and skilled workmen but lacked the working capital necessary for performance of the proposed subcontract. The president of the Warley company accompanied the manager of the machine shop to the bank with which the Warley company ordinarily did business and told the banker that the machine shop could have a profitable subcontract if credit could be obtained. The manager of the machine shop submitted his application for a loan. The banker explained that he would like to make the loan but was hesitant because he was unable to judge the shop's capacity to do the work called for in the subcontract. . . . The banker maintained that, since the Warley company was competent to investigate the matter and was taking the brunt of the responsibility, it should guarantee the subcontractor's credit. The manufacturer refused, explaining that it had more than 50 different suppliers and that, if it started guaranteeing credit, it "would be going into the banking business." Agreement on the matter proved impossible.

Now for each instance of a refusal to lend, the author cites several in which bankers went out of their way to arrange the financing necessary to see a business man through a defense order. There's the bank that extended a loan which, under normal circumstances, it wouldn't

have touched. But, as the banker put it, "Unless the banks do the job, the government will." Yet the cases of the chemical company and the machine shop suggest that at times companies which have machinery, manpower, and a certain amount of technical skill are foreclosed from taking defense business because they cannot lay their hands on cash.

• Admittedly, in the case of the chemical company, the banker would have been taking a pig-in-the-poke loan—for 6% or less, probably less; and the same applies, but not so emphatically, to the machine shop. But that does not alter the fact that here is a schism—a blockage—in our defense effort. Our financial and industrial machines don't always mesh gears.

Of course, ways of obtaining special financial assistance are open to the small- and middle-sized company. The Army will accommodate with an advance payment when it needs something badly. Banks will make inventory loans on field warehouse bonds or on trust receipts. And, oftentimes, the Federal Reserve Banks or Reconstruction Finance Corp. will come through. But the possibilities here, except for especially qualified large companies or plants, are rather restricted. Mr. Bollinger notes: "In the main, the defense role of both the RFC and the Federal Reserve banks has been to 'back up' the commercial banking system by standing ready to grant any reasonable credit the commercial banks might refuse and to participate in loans where the full amount is too large for an individual bank." In other words, the RFC and the Reserve banks will take sound risks if commercial banks won't take them; but, as a rule, they do not enter the "field of nonbankable risks."

• As yet, shortages of working capital have not been readily apparent, especially since such a large proportion of government armament orders have been meted out to the bigger corporations. But Mr. Bollinger cautions against optimism or complacency, saying, "Although the existing credit mechanism has thus far been reasonably adequate for the special needs of defense, numerous orders have been delayed because of financial problems. In the aggregate, the consequences have been more detrimental than generally realized. . . . The problems to be faced are becoming increasingly difficult, and it is only prudent to anticipate possible inadequacies for an all-out defense effort."

The inference is clear. If, as seems to be the trend, the defense program reaches out into the nation's industrial byways for every skilled man and every skilled shop capable of turning out arms, then the government will gradually be forced to guarantee loans of or arrange direct accommodations for the small business man. The first trend depends on the second and vice versa.

The Editors of Business Week

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Week
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SINES
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DEX